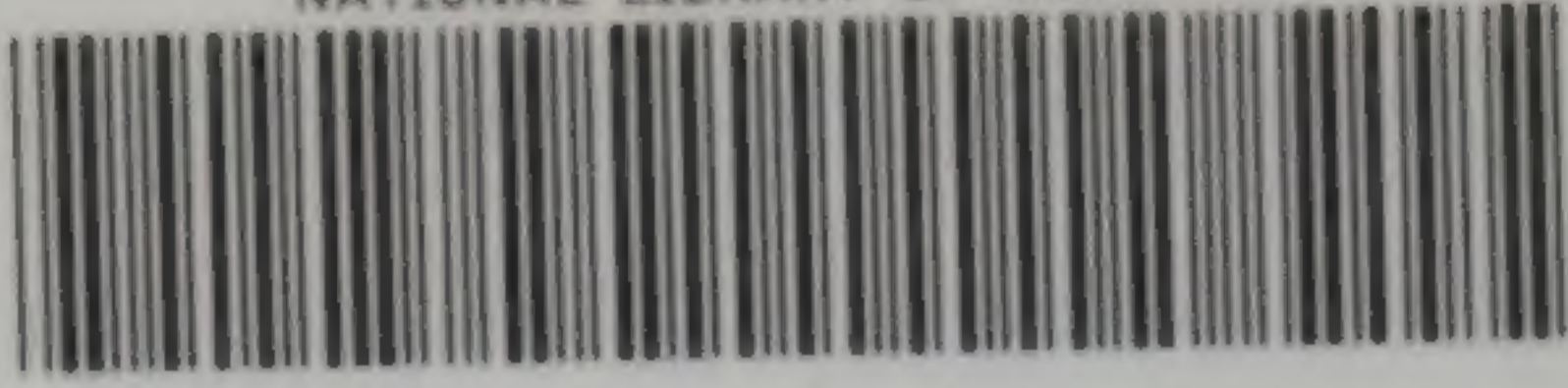


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UTERINE DISPLACEMENTS

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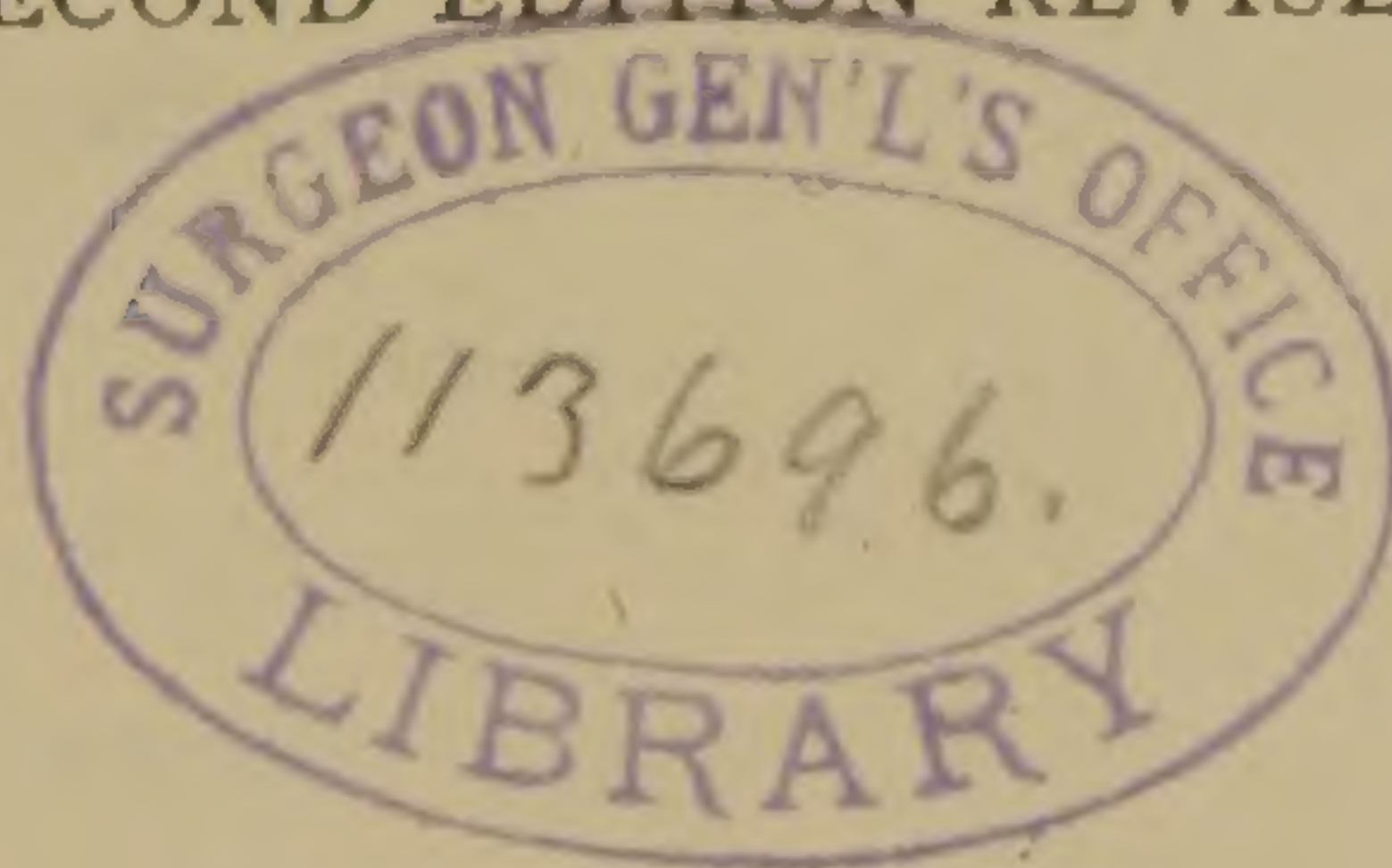
Section,

No. 113696.

A TREATISE
ON
UTERINE DISPLACEMENTS.

✓ BY
S. J. DONALDSON, M. D.

SECOND EDITION REVISED.



BOSTON: BEACON PRESS.

1883.

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S. J. DONALDSON, M.D.

PREFACE.

IN July, 1882, I published a little book called *Contributions to Practical Gynæcology*, embodying two essays read before the New York Medico Chirurgical Society. The work had scarcely left the press before I regretted its publication, it having been too hastily written, and consequently betraying crudity and incompleteness. Time has only intensified this regret, and increased the earnest desire to correct the manifest imperfections. The kindness with which the production has been received, has brought about the wished for opportunity sooner than I had anticipated. In the revision I have thought best to deal only with that which relates to uterine obliquities, reserving the second part (Dysmenorrhœa) for a future consideration and improvement.

23 West 42d Street,
New York, November, 1883.

UTERINE DISPLACEMENTS.

THE management of uterine deflexions, has ever been a perplexing problem to the medical profession. Any physician sufficiently interested, and persevering, to review the mass of literature that has been advanced on this subject, will be strongly impressed with the remarkable diversity of opinion therein expressed; or, being unwilling to undertake so laborious a task, let him contemplate the vast array of pessaries that have been made from every available material, into every conceivable shape, displaying such a lack of unity in design, and he cannot but feel that in the minds of the inventors utter confusion reigns concerning the pathology and treatment of the objective abnormality. Living as we do, in a period where the field of anatomical research is unrestricted, and the records of past experiences are compiled for ready reference, it is particularly surprising that so many manifestly untenable methods, and theories, concerning the treatment of this very prevalent anomaly are held.

In view of this marked discrepancy of opinion, one may infer, and justly, that the medical world at large is very far from having attained an intelligent comprehension of the situation.

It may be safely stated that the non-success

usually attending the treatment of these difficulties, has done more to reflect discredit upon the gynæcologist, than all other failures combined. Remarkable proficiency has been attained in the performance of capital operations; but, notwithstanding these brilliant achievements, we stand arraigned with having deplorably failed in devising means for the cure of those equally important and infinitely more common conditions, *viz.*: versions, flexions, and prolapsion of the uterus.

It is evident, therefore, that somewhere in our mode of thought and procedure, there exists a serious defect, and it is high time we discard misleading theories regarding local processes, and mechanical devices, and earnestly apply ourselves directly to the primary influences that lie at the foundation of the matter.

With this object in view we will discuss in the following pages:

1. Some of the stumbling-blocks lying in the path of our advancement.
2. The origin of the abnormities about to be considered.
3. The rational treatment of those affections.

Of all men the gynæcologist should be the most profound, practical, and independent reasoner; his dominant characteristic being decided ability in the tracing and analyzing of cause and effect. If doctrines emanate from teachers never so eminent, let them not be adopted, until submitted to the test of a careful, practical analysis, as applied to etiology, physiology, and above all, to that rare attribute, common sense: only after this candid, conservative

review should they be accepted or rejected. Possibly this will seem a very ordinary and commonplace suggestion; nevertheless, it possesses a deeper meaning than appears on the surface, credulity having been one of the prime obstacles in the way of our success.

The profession abounds in men who are mere imitators of certain leaders, and a new theory is no sooner promulgated in plausible style, than it finds credence in the minds of a multitude of practitioners. We can better illustrate our statement by referring to a few well-known facts.

Not many years ago ulceration of the os uteri was regarded as one of the chief sources of suffering in women. At that time, it was exceptional to find a physician who did not carry in his pocket his loaded *porte caustique*, eager to sear the os uteri of all patients sufficiently unfortunate to complain of a vaginal discharge, or backache.

A Simpson advances the theory that uterine stenosis is the cause of *dysmenorrhœa*. This plausible theory no sooner appears in our journals, than a host of physicians (including professors as well as country practitioners) arm themselves with uterotomes, and insist upon slitting open the uterus of every woman menstruating painfully. Next we have an Emmet who teaches us the true pathology of what had previously been regarded as "granulations," "ulcerations," etc., of the os; and now we hear these same enthusiasts (forgetting their previous hobbies, and indifferent to lessons they should have conveyed) wisely declaring that more than fifty per cent of their patients who have been pregnant are suffering from neglected, lacerated os uteri—and so the story re-

peats itself. No sooner does an acknowledged leader present some specious and novel theory, than a swarm of imitators run tandem after the same doctrine, adopting it with avidity, and seldom weighing its merits and demerits, or assigning to it its legitimate sphere. After repeated experiments, and much needless suffering of their patients, these fanatics transfer their enthusiasm to some newly advanced assumption, the value of which they overestimate, and the real utility of which they injure by their unskillful overdoing. As an impediment to the vigorous, healthful growth of our specialty, none greater is furnished than in this impulsive credulity, coupled as it usually is with an immoderate confidence in personal ability. Surely past experiences have furnished sufficient warnings to guard us against heedless impetuosity, and to teach the advisability of being strictly analytical. It is these hasty temperaments that, through their mischievous energy in manipulation, so often bring opprobrium upon our specialty, and whose lamentable failures build up another class, distinguished by their skepticism, and who, though safer to the community, make themselves obnoxious by their supercilious contempt, silent or expressed, for all forms of operative procedure. This would be to a certain extent defensible, if correlated with anatomical and physiological knowledge of the subject; but when coupled with imperfect understanding or positive ignorance, it becomes insufferable. Fortunate those who are able to preserve a happy medium between either extreme.

Another hindrance to our development lies in the fact that the exclusive study of specialties narrows

the mind and engenders one-ideaism. An ardent oculist convinces himself, and attempts to prove to his patient, that a distorted vision irritates the nerve centers, and is reflected upon other and distant organs, to such a degree as to pervert their functions, and to establish in them any co-existing abnormality.

The neurologist discovers that all diseases presented for his consideration hinge upon a deranged condition of the nerve centers, or depolarized nerve cells. We regret to be obliged to acknowledge that this peculiar mental tendency is very observable among gynæcologists. Instances are by no means rare where some operative measure for the correction of an ordinary local lesion, some hypothetical theory, or the prescription of a favorite remedy, would seem to represent to certain circumscribed minds all that is meritorious or requisite in the gynecic sphere. Herein, then, we perceive a prominent obstacle in the way of advancement.

Another impediment is the predisposition of gynæcologists to attach undue importance to the performance of operative procedures, to the neglect of those vastly more important essentials connected with hygienic and physiological laws, the neglect of which inevitably defeats all other efforts.

To illustrate: A case of prolapsion is presented, the diagnosis is easily made, the habits and constitutional defects of the patient are not inquired into, but a pessary is adjusted, and the case considered correctly disposed of for the time being. It is hardly necessary to pronounce this course an entirely erroneous one, there being so many primary causes which produce the prolapsion, one of the most prominent

being constipation. Frequently the patient has suffered from this disorder to such an extent that the uterus has been pushed downward by repeated expulsive efforts; and yet this exciting cause is allowed to go on uncorrected, or, if receiving any attention, a cathartic, or enema, is ordered which invariably results in an aggravation of the condition. Not unusually there is found a lack of vital tone resulting from an injurious manner of living. In treating these cases, the above-mentioned causes are generally completely overlooked or ignored, instead of receiving the first consideration, as they should, local treatment being but secondary.

The same suggestions are applicable to the treatment of dysmenorrhœa, ovaritis, metritis, and every local manifestation of disease. Judging from general observation, we might reasonably conclude that the efforts of the gynæcologist were restricted to the pelvic organs, and we are all acquainted with the result of this short-sighted farcical treatment. These patients go on month after month, year after year, receiving no benefit, and often rendered much worse by these mischievous manipulations. We need not hope for success until we learn not to confine our efforts to mere diagnosis and local treatment; but to look beyond all this, and search out all influences, near and remote, that have contributed to the abnormality. The habits of the patient, her dress, diet, posture when sitting, standing, or walking, the amount and nature of the air she breathes, and even the mental emotions that sway her, must each and all be taken into account. The wide field of study here presented is well-nigh inexhaustible, and volumes

might be written on the subject. Nowhere in the realm of medicine is found a more profitable or interesting study than that presented in the tracing of the intimate relation existing between cause and effect, as manifested in the female economy. These are mere suggestions of a subject upon which we will speak more fully in our consideration of the treatment of local abnormalities.

Another prominent obstacle placed in the way of our advancement, is the incorrect diagrams used to illustrate the text of the majority of our reference books. Every qualified practitioner is supposed to have gained during his experiences in the dissecting room, a correct knowledge of the anatomy of the female pelvis, but all know however, that knowledge thus acquired is as a rule very imperfect. Generally the student does not appreciate the importance of this matter, and his time is spent in studying the anatomy of the extremities and truncal walls. It is safe to state that the majority of physicians of today, although having studied the anatomy of the female pelvis, were never taught the important mechanism of the pelvic wall structures, and the relation sustained to them by the pelvic organs. Now it is indisputable that a correct knowledge of the topography of the female pelvis, is of the utmost importance, before any attempt be made at correcting a deviation of those organs. The advantages of pictorial illustration over mere verbal description are well known, and yet how deplorably this potent factor is abused. Look, for example, at the descriptions of the female pelvis given by Gray in his text-book of anatomy. Could any illustration be better calculated to mislead

the practitioner in his treatment of uterine deviations. The vagina is portrayed as an immense, dilated, cylindrical tube, standing nearly parallel with the axis of the body, the uterus resting upon the upper extremity of the canal, the two organs forming

one enormous curve, bent slightly forward. The text further misrepresents by giving the dimensions of the vagina as follows: "Its length is about four inches along its anterior wall, and between five and six inches along its posterior wall."

To gain a more definite comprehension of the absurdity of these misrepresentations,

let any one take a pair of calipers, and note the inaccuracies of this diagram which is familiar to all from its frequent copyings. Concerning this diagram, Dr. Thomas remarks: "This certainly portrays a state of things which never exists except artificially produced, and distorts the reality to

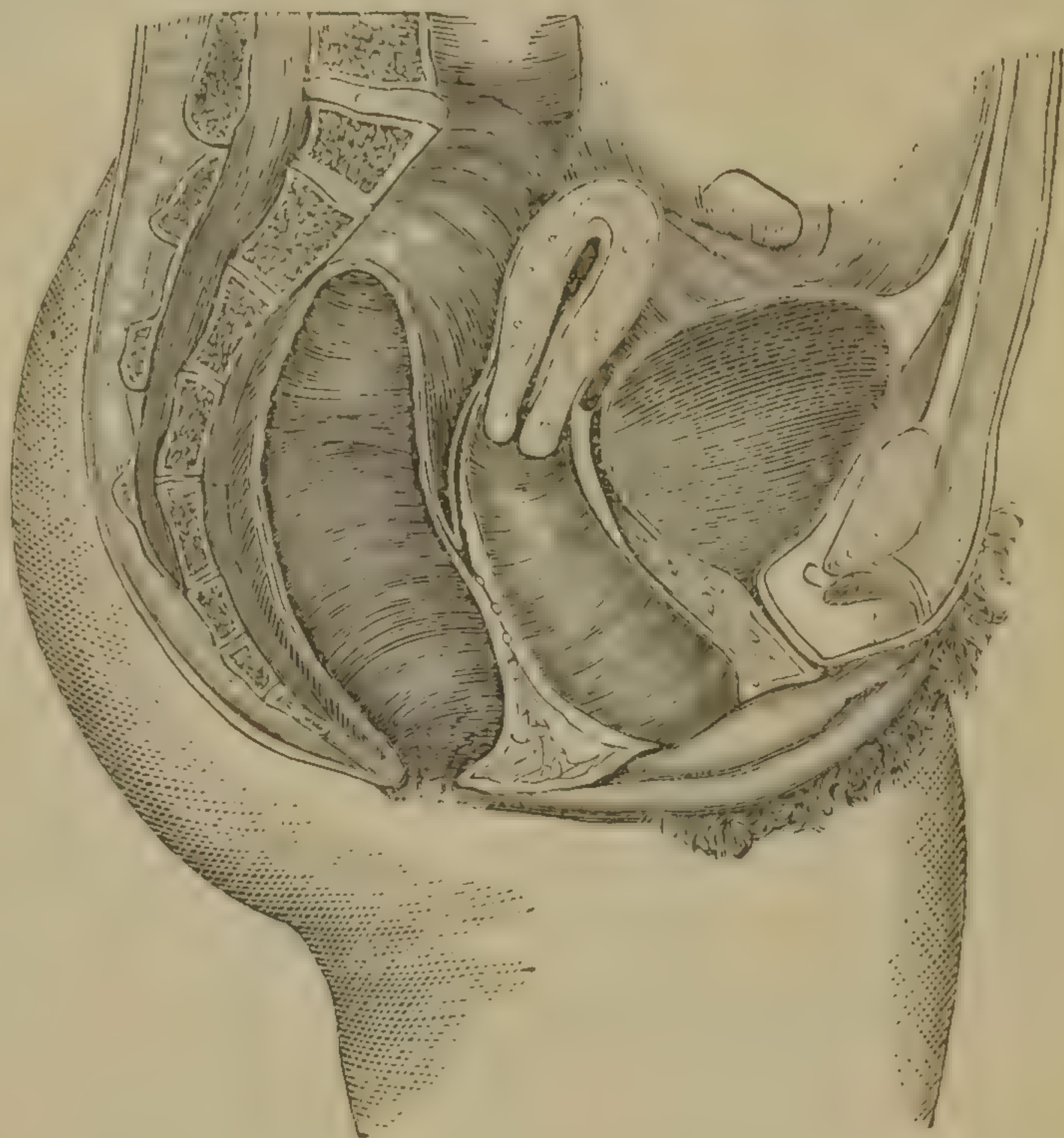


FIG. 1.—Diagram usually employed in representing the female generative organs and pelvis. It is concerning this cut that Dr. Thomas remarks: "This certainly portrays a state of things which never exists unless artificially produced, and distorts the reality to such an extent as to be productive of absolute evil, yet this is the diagram employed by Gray, Wilson, and many others, and even today is quite commonly copied into works dealing with this subject in a special manner."

such an extent as to be productive of absolute evil; yet this is the diagram employed by Gray, Wilson, and many others, and even today is quite commonly copied into works dealing with this subject in a special manner." Here we have the pubic bone represented five inches in advance of the sacral prominence. The antero-posterior diameter of the pelvic cavity, as here shown, is about eight inches. Note the uterus standing in the center of and above the pelvic plane, parallel with the truncal axis, supported by the enormously distended tube occupying the pelvic curve. The representation of the rectum is a striking caricature of that organ, and needs no comment. And yet these are the diagrams that for many years have been presented over and over, as means of instruction. Can it be possible that such misconceptions are entertained by those whom we acknowledge as our guides and teachers? We will not willingly believe this, nevertheless here is the result. Many will recognize the following suppositious case as familiar. A recently graduated, or inexperienced physician attempts to treat a patient for slight prolapsus. He secures a pessary from five to six inches in length, and attempts to prop up the uterus in a position corresponding to his preconceived ideas of the normal attitude of the organs. His confusion and utter discomfiture are only equaled by the distress of the patient, and after repeated futile efforts he is forced to desist. We naturally expected to find these evils summarily dealt with in the latest edition of Dr. Thomas' popular work, but it is greatly to be regretted that he has allowed to pass unimproved this opportunity of giving to the medical world a valuable

and instructive lesson. Our attention is attracted to the subject more particularly from the fact that the author himself comments upon the previous cut, showing plainly that he considers these misrepresentations a matter of regret. Dr. Thomas proceeds to give us an ideal diagram with these words: "Figure 43 represents my idea of the true relation of the vagina, bladder, uterus, rectum and perinæum to each other." This diagram we here reproduce for the sake of still further illustrating our argument, and of giving a better knowledge of the normal condition by a comparison of the accuracies with the inaccuracies.

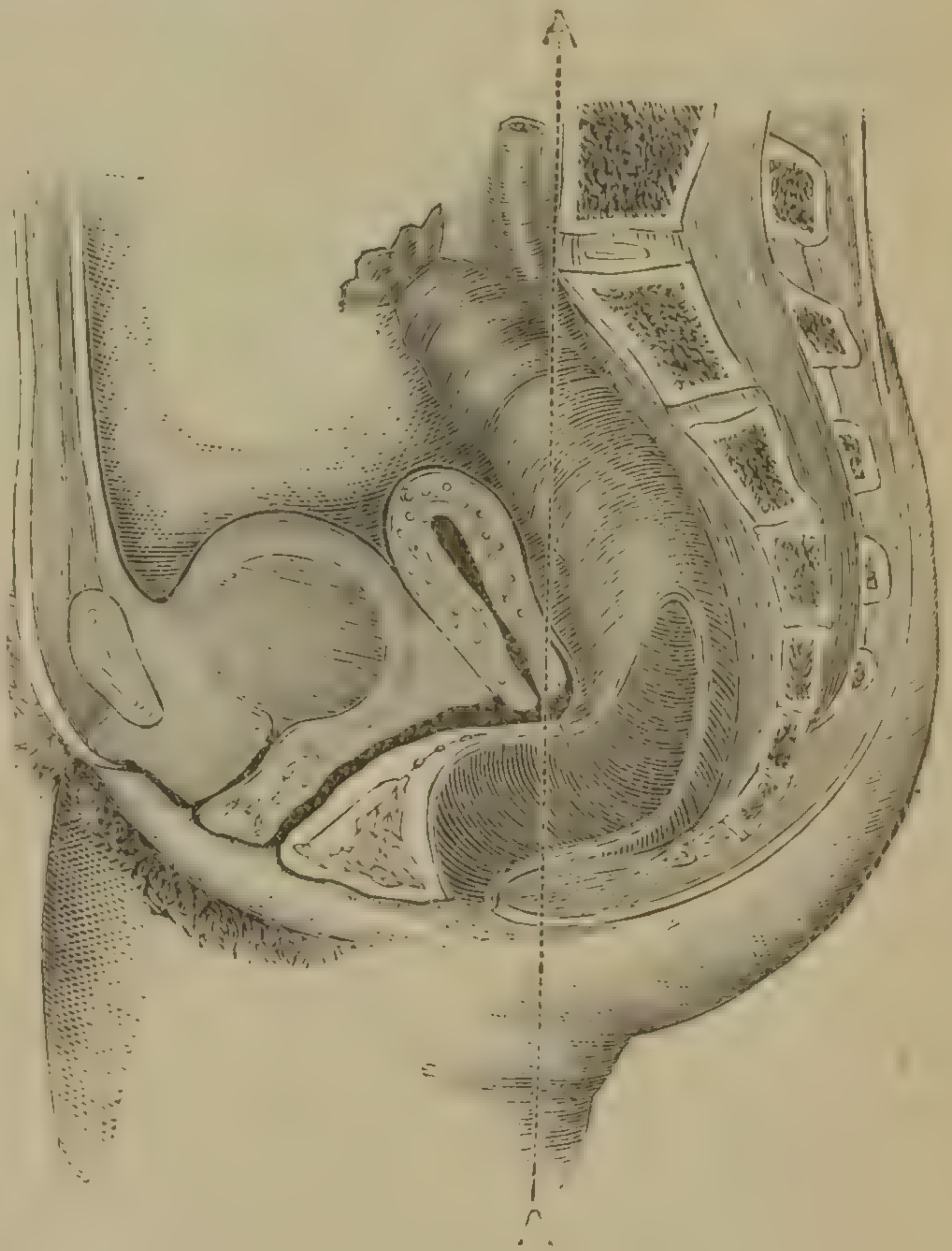


FIG. 2.—Dr. Thomas' ideal diagram of female pelvis.

This cut, it will be noticed, is an exact reproduction of Dr. Thomas' ideal diagram, with the addition of the dotted lines A A which we have taken the liberty of adding to aid us in drawing our comparisons. We will notice that the entire pelvic contents, with the exception of a small portion of the rectum, are anterior to the line drawn in front of the sacral prominence. The sacro-coccygeal segment as represented

terminates several inches lower than it does in nature. The pubic bone is placed far in advance, and in such a position as to be utterly incapable of acting as a means of support to either the abdominal or pelvic viscera. Consequently, the entire weight of the viscera must rest directly upon the perinæum, and this is manifestly the author's idea, since he designates it as the "key-stone," and also has represented it in an exaggerated form. If this cut represented the normal condition of the pelvis, we would not wonder at the importance which the author places upon the perinæum, as a supporting structure; this being the case, the perineal body would necessarily require great resisting power to withstand the weight of the superimposed viscera. Between the vaginal outlet and os pubes is represented a mass of tissue which has no counterpart in nature. The only noticeable features of improvement in this cut over its predecessors are the axes of the vagina and uterus, which are correctly reproduced, forming a right angle, and the diminished caliber of the vaginal canal. It is evident that Dr. Thomas, in common with many other brilliant teachers, is partial in his dealing with his subjects, and in this instance his predominating thought is the demonstration of the perineal function.

So fully is the author's mind imbued with this idea that he is apparently oblivious to other equally and even more important features belonging to the subject. Before dismissing this part of the discussion we will take another diagram from the same edition (page 403) containing the preceding cut, which we select for several reasons. In our literature, we are constantly encountering diagrams illustrating the

application of divers instruments, wherein the normal position of the part to be treated is actually ignored, the illustrated anatomy being made to conform to the appliance; consequently the effect is deceptive, unless the practitioner has a critical and experienced eye. In connection with no class of appliances is this misrepresentation so extensively practised as with the adjustment of pessaries. We are all the more surprised at finding this illustration in Dr. Thomas' admirable work, after perusing his teachings in a previous portion of it. Indeed, there seems to be a strange incongruity in the author's conceptions of what constitutes the normal position of the uterus. On page 156 (Fig. 1) is exhibited a cut which the author previously condemns as being "a state of things

which never exists unless artificially produced and productive of evil;" but on page 403 we are presented with precisely the same state of things as an illustration of proper manipulation. Referring to the last diagram, the author continues: "No pessary with which I am acquainted so universally answers the indications of supplementing the action of the utero-sacral ligaments, and sustaining the prolapsed vagina, rectum, and bladder, as Cutter's admira-

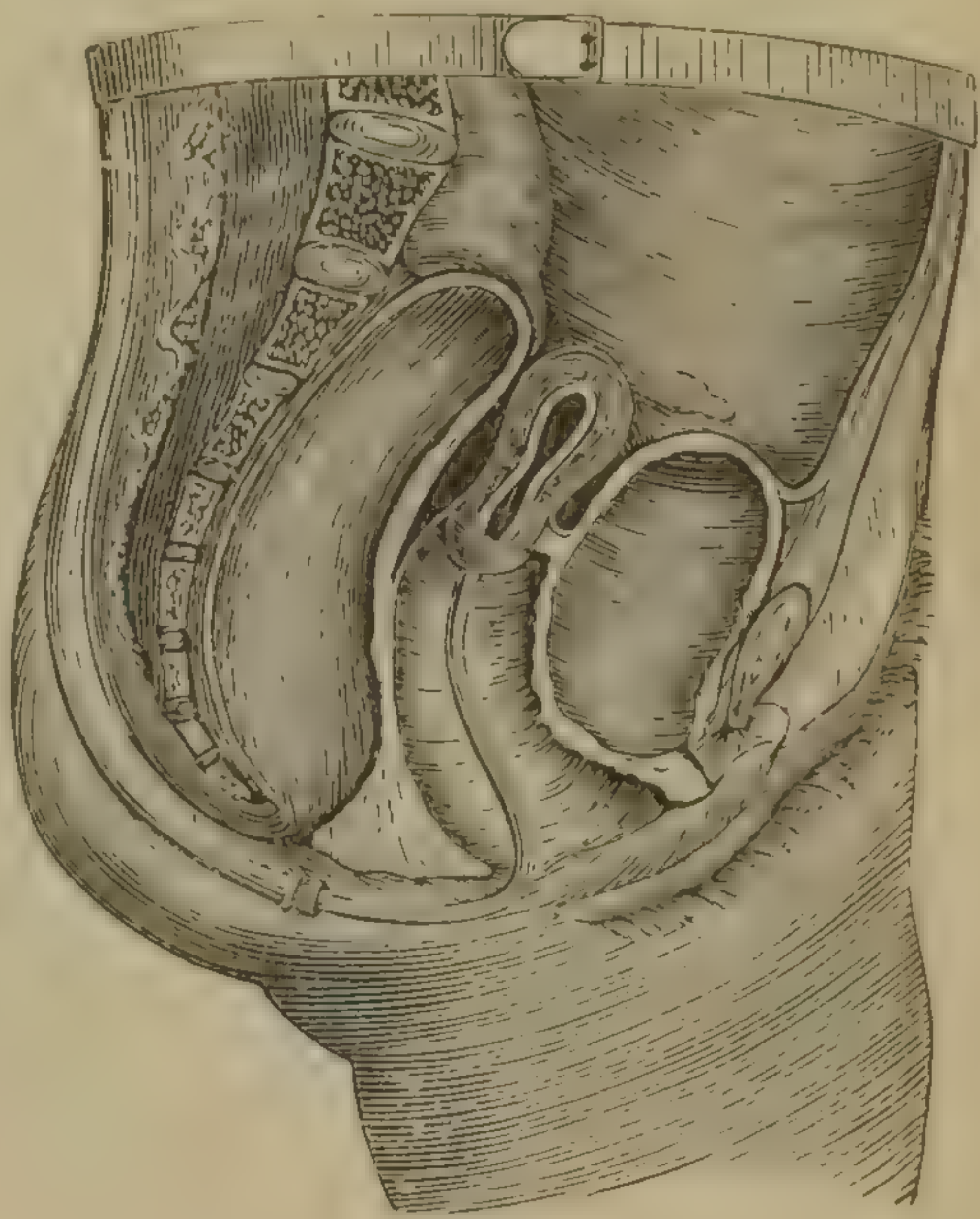


FIG. 3.—Dr. Thomas' diagram illustrating adjustment of stem and cup pessary for prolapsus.

ble pessary shown in Figure 145. The cup at its upper extremity receives the cervix uteri," etc.

After reading these words turn to his ideal diagram (Figure 2), and try to conceive how this "admirable pessary" is to receive into its cup the cervix uteri, if inserted with the vagina and uterus occupying their normal relative position as here represented. It will at once be apparent that the adjustment of this instrument, as shown in Figure 3, would be simply impossible without first elevating the parts and dislocating them forward, so as to destroy the utero vaginal angle. Such an instrument, introduced with the uterus normally situated, must impinge the edge of its cup against the anterior surface of the uterine neck, and the os uteri would look from, rather than into, its cavity. How can such contradictions be reconciled?

Every style of stem and cup "supporter" (?) whenever applied for prolapsus, imperfectly accomplishes, in an irritating, bungling manner, the pushing of the os uteri backward into the hollow of the sacrum, but it does not lift or sustain the parts, as is usually represented. The defects of this cut are no more glaring than those characterizing the majority of diagrams used to illustrate the various methods employed in the manipulation of displaced uteri. Taken collectively they present a most inviting topic for dissection; but we must confine ourselves to these already noticed, which relate directly to, and substantiate our argument. That such misconceptions were to be entertained in the days when anatomical research was restricted was to be expected; but the perpetration of such gross misrepresentations while surrounded

by unlimited advantages, is inexplicable. We most earnestly protest against the perpetuation of this mimetic perversion of our reference books, infinitely preferring the plain, solid, text unembellished by these pictorial stumbling-blocks.

We have only considered a few of the obstacles which a faulty education has placed in the way of our successful achievements. Many pages might be devoted to this subject, but our object is simply to awaken in each mind the desire for practical and independent research. To attain a fuller comprehension of the manner in which this imperfect knowledge of anatomy and topography of the pelvic contents interferes with the successful manipulation of these organs, we will proceed to study the anatomical outlines of the female pelvis. We are accustomed to hearing the ligaments of the uterus spoken of as though they in a measure upheld or sustained that organ. Nothing is more common than to hear a physician discussing the "relaxed condition" of these ligaments, and attributing to this anomaly the dislocation of the pelvic organs. Let us see how far this theory can be sustained.

In the first place, when we regard these tissues as ligamentous, we do so from custom, and not from their structure, for we know that these so termed ligamenta are merely folds of the peritoneum enclosing a few muscular fibers. If we open the abdominal cavity and look into the pelvic basin, we notice the peritoneum spread over the fundus of the bladder, uterus, fallopian tubes and ovaries. The effect is as though these organs had been thrust up against the ample peritoneal membrane, which enfolding

these organs forms these duplications called ligaments. First, we have the broad ligaments coming from either iliac region, enfolding the ovaries and fallopian tubes, and enveloping the fundus uteri. The direction of these is such as to afford no support to the uterus, but only to maintain its parallelism. The position and insertion of the round ligaments, together with their circuitous route, make it evident that their function is merely antagonistic to an over-distention of the bladder. Opposed to these are the sacro-uterine ligaments, where the peritoneum is reflected across from the cervico-uterine junction to the rectum, which it partially surrounds. As we shall see later, these folds also act as mere conservators to the uterine balance. That these uterine ligaments do not act as supporters can be farther demonstrated, by hooking a tenaculum into the cervix uteri and making traction in the direction of the vulva. By this manœuvre we prove that the descent of the uterus does not render tense any of these so termed ligaments except the ligamenta sacro-uterine, and these are not drawn until the uterus is well advanced toward the outlet. Consequently we prove that these ligaments merely serve to balance the uterus laterally, upon the same principle that the center staff of a tent is stayed by the guy ropes and canvas.

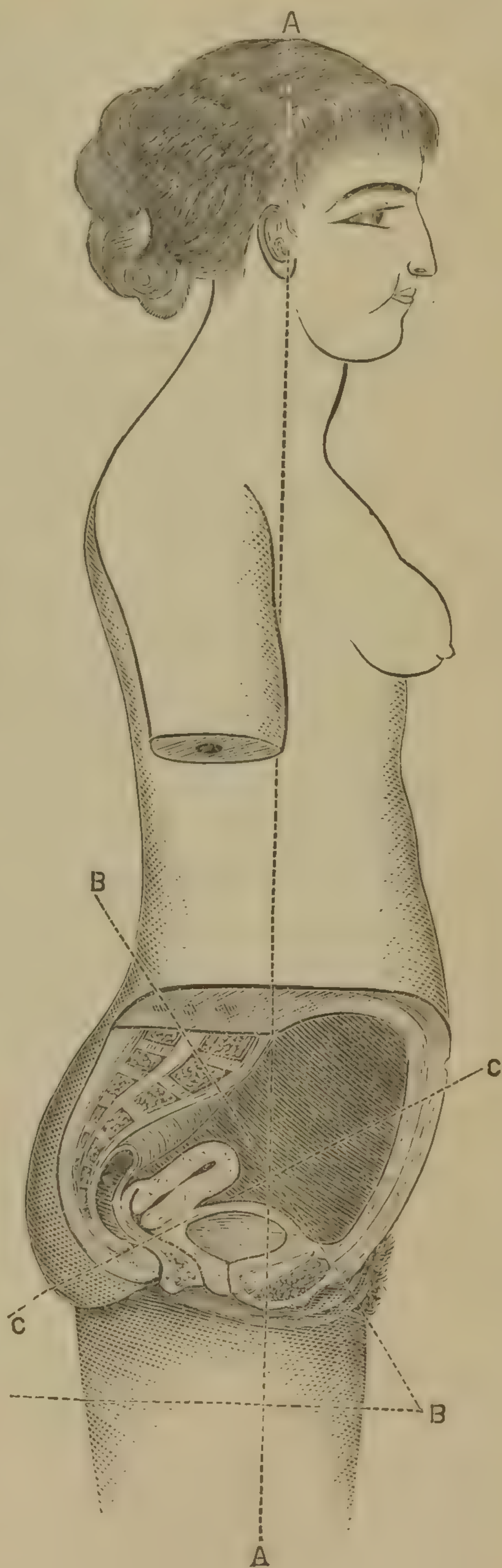
If we remove the peritoneum from the pelvic organs, we will discover that beneath it and surrounding all the pelvic viscera, so as to fill every space of the pelvic cavity, is the light areolar tissue, with its net work of blood vessels. So then, our more careful dissection discloses the fact that the uterus

and ovaries are not suspended, but rather float in this cavity cushioned with this spongy areolar tissue, which connects all the pelvic organs to each other and to the wall of the pelvic basin. Now, in order that we may study the relation of the pelvic parts, if we take a section of the female trunk, we will notice that the uterus does not stand in the center of the pelvic cavity with the weight of the intestinal viscera resting upon it as is usually represented in the diagram, but it reclines beneath the overhanging sacral arch, with the anterior surface of its body in contact with the bladder, which we will see constitutes one of its chief supports. The direction of the uterus is downward and backward toward the last coccygeal bone, and its axis, as a rule, forms a right angle with the vaginal axis. We should also notice particularly that the cervix uteri is placed normally, within one inch to one inch and a half of the posterior pelvic wall. This is a very important point, as we shall find hereafter when speaking of the nature and treatment of prolapsus uteri. The length of the uterus is about three inches, and its weight from eight to twelve drachms, not a very heavy organ in its natural condition. The cervix uteri is usually in contact with the posterior vaginal wall. The length of the vagina, together with its double curvature, are important gynecic considerations, it being undeniable that, if the dimensions given by Gray and other authorities be taken as a guide, the result will be confusion to the physician, and positive injury to those patients attempting to wear pessaries made in conformity with the statements found in some of our textbooks. The vagina, instead of being four inches in

length, measures when undistended about two and a half inches anteriorly, and about three and a half inches posteriorly, instead of from five or six, the measurement given by Gray. The upper two thirds of the posterior wall of the vagina are connected with the anterior rectal wall by loose areolar tissue. The relations and attachments of the bladder should be carefully studied, since these are of paramount importance in the treatment of our subject. This viscus is not a globular organ, except when considerably distended. When moderately full, its walls in an antero-posterior section, would outline a triangle. The surface which looks toward the sacrum, supports the uterus. Its abdominal surface is not of especial interest to us here, but its inferior surface, extending from the utero-vesico vaginal junction, should receive careful attention. We notice that at its lower angle it is intimately associated with the uterus, and with the vagina as far forward as the urethra. The recto pubic angle, bounded by the os pubis, urethra and vesical walls, is filled with a mass of cellular tissue and fat. On this spongy cushion the bladder oscillates readily to and fro, consequently the bladder virtually has no direct sustaining attachments, but simply rests upon the os pubis with this mass of loose tissue intervening. The extreme mobility of the bladder is one of nature's safeguards, for, did it not exist, this organ would be in great peril during childbirth. Owing to the advantage afforded by this non-attachment, it can rise above the pubic bone, and thus escape the compression which otherwise would unavoidably occur at the birth of the head of the child. We shall see later that this mobility of the bladder is

an important consideration in the treatment of prolapsions. Having noted the relative position of the uterus, vagina, and bladder, we now come to the consideration of the most important feature of our studies, namely, the position and function of the pubic bone as related to our subject. We have seen in what manner it supports the bladder, which in turn serves as a grateful cushion for the uterus to recline against. The os pubis is therefore a most important agent in sustaining the position of the pelvic viscera.

If we could drop a plummet line from the vertex through a correctly poised erect human body, its course would be as follows: from the ver-



tex to a point in front of the sacral prominence — passing from thence through the pubic bone to a point at the instep of the foot. Comparing the sections of the body on either side of this line, we notice that they are equal as a whole. In front of this line, we have the greater portion of the abdominal viscera, while the pelvic viscera is wholly posterior to it. It will be perceived then that the pubic bone is the center of gravitation for the abdominal organs. If we study the graceful curves of the spinal column in this connection, we cannot fail to admire the nature of the design and its evident harmony. From the sacral prominence, the structures curve backward, bringing the entire pelvis in the rear of the truncal axis; consequently these organs are guarded from dangers by the sheltering sacrum, whose prominence is directly above the os pubis, thereby causing the weight of the abdominal viscera to fall upon this powerful support — the pubic bone. If we advance a step farther and imagine an impulse glancing down the incline of the spine, we will perceive that this impulse must impinge against the resilient abdominal wall, where its reflected force will be along the pelvic axis in the direction of the sacral cavity in such a manner as to really lift the pear-shaped uterus upward and backward. An impulse starting from the diaphragm, as in coughing or sneezing, will expend its direct force upon the pubic bone, with a slightly reflected impulse toward the coccyx. In either instance, the shock received by the pelvic organs is not in the direction of the vulva, but toward a sufficiently resisting segment. It is evident, therefore, that the soft parts forming the pelvic floor, require but a moderate degree of resiliency in order

to keep the uterus and bladder balanced, as when the body is correctly poised, all actual weights and shocks are received upon firmer structures. We cannot too forcibly present this principle of truncal bearing in standing, or sitting, when related to the well-being of women. We are confident that there is altogether too much importance ascribed to the functions of the perinæum, it being regarded by the majority as the chief agent of support for the generative organs. We take the view, and believe it to be easy of demonstration, that the pubic bone is the mainstay of all the visceral organs, and the secondary supporting power is found in the recto-coccygeal segment. To illustrate its greater resistance: if we make a digital examination with the woman standing correctly, we will notice that the portion of the vaginal walls opposite the vesico-vaginal septum bulges toward the bladder, and if pressure be made in the direction of the rectum, there is a decided resiliency of the tissues at this point. Nor is this resistance dependent upon the perineal body, for it is repeatedly observed where this body is severely lacerated. Now, if the other digital finger be placed in the rectum, and traction be made upon the posterior rectal wall sufficient to overcome the resiliency of the coccygeal body, it will be found that the resistance of the recto-vaginal septum at its middle third is almost lost. It would appear, therefore, that the support of the bladder and uterus is derived more from the recto-coccygeal segment, than from the perineal body. Do we not frequently find the uterus in normal position when the perinæum is badly torn? and on the other hand, there is often extreme procidentia where the perinæum is not impaired through laceration.

CHAPTER II.

WE now come to the second division of our subject, namely, the ætiology of uterine distortions. The belief that prevails in the minds of many that the uterus can be suddenly dislocated, is an erroneous one. Such an accident, if possible at all, must be extremely rare. As a rule, abnormal obliquities, and prolapsion of the uterus, are the results of long standing, perverting influences. Some of these conditions it is known may be congenital; the majority however are acquired. It is often most difficult to trace the history of these abnormalities to their source. Even where the exciting cause is positively defined, we believe that there has often existed, long before the accident, a predisposing influence. A childbirth or miscarriage may be followed by prolapsion and retroversion in one woman, while another escapes subsequent unfortunate results, even under less favorable circumstances.

In the first case, the recuperative powers are manifestly inferior to the second; and yet, at the same time, the second case may not naturally possess the same amount of vitality. The requirements of the situation will never be met simply by the possession of skill as diagnosticians or operators. We must enter into the subject much more deeply, dealing

directly with the essentials underlying the disturbance, so that the evils in which the disease originates may be corrected. Hence we are led to conclude, that, in order to arrive at an intelligent solution of the problem, we must push our inquiries into the earlier history of our patients. We will then discover that the foundation of many of those maladies was laid during the period inaugurating menstrual life.

The system of education which crowds into the years between ten and sixteen an amount of mental work which should be extended over double that time, is largely accountable for much of the suffering endured by women. In the first place, nature has imposed a heavy tax upon the female economy in the development of the generative organs, and these are seriously interfered with when the reservoir of her vital forces is too largely drawn upon in the mental struggle. This period of severe mental work is at a time when most important bodily changes are developing, and when the physical training should keep at least even pace with the mental, instead of which the girl is frequently denied the advantages of ordinary exercise. The girl who nearest equals her brother in outdoor sports will none the less worthily fulfill the duties which after years will impose upon her, and in proportion to her physical development will she be insured against pelvic disturbances which, as a rule, are associated with and engendered by atony of the muscular tissues. Where sunlight and physical training are avoided by women, pelvic diseases will soon abound.

In Great Britain and on the continent it is not

unusual to see women vieing with the men in the performance of outdoor labors, with no ill resulting therefrom. In Germany, Austria, Belgium and France, the female outdoor laborers outnumber the male; and it is a well-established fact that in this class are comparatively few who suffer from those maladies so prevalent among their more daintily nurtured sisters.

Another pronounced source of uterine difficulties and one that seems to be ignored by all, even physicians, is that the restless ambitious spirit so characteristic of American women is often thwarted, and so reflects unfavorably upon the generative organism. To excel in some department is her strongest desire. In every other land there are established limits which clearly define the walks of life, and the women are educated to accept contentedly the sphere originally assigned them; but with us no arbitrary boundary line is fixed, and nothing seems absolutely unattainable; consequently, in every field, there are so many competitors that naturally some must be worsted in the strife, hence the discontent that is so rife in woman, and that so seriously affects her physical well-being. Nothing reacts more disastrously upon her sensitive organization than disappointment, and defeated ambition. This spirit which pervades us as a people is no doubt partially referable to our climate. Its sudden changes and extremes of temperature not only engender, but compel disquietude and sensitiveness of the nervous organization, and besides exerting this neurotic influence, it is highly favorable to catarrhal and congestive conditions.

The appointments of our American homes

demand especial attention, since they largely contribute to the infirmities of those who spend the greater proportion of their time within doors.

To discuss the ventilation, drainage, and manner of heating our houses, would perhaps be out of place in this work, but the matter is not sufficiently taken into consideration. Unquestionably, many women suffer from a vitiated condition of the blood, directly dependent upon insufficiency of light and fresh air.

The subject of which we wish to speak more particularly in these premises is one seldom referred to by medical men, *viz.*: the style of upholstering now in vogue. If we associate the normal truncal bearings, as illustrated in a previous chapter, with the position which the modern chairs and sofas enforce upon their occupants, we will immediately perceive the point in question. Our energetic, efficient grandmothers, who sat erect in firm-seated, straight-backed chairs, tell us truthfully and with justifiable pride, that those ailments now so seriously affecting their daughters, and granddaughters, were little known in their day. Now compare the truncal bearing of one of these rigid dames with the attitude of so many young women of the present generation, as they fall a limp, inert mass into one of the modern inventions, half chair, half sofa, but wholly an abomination.

Confine the body in stiff corsets with a steel splint extending nearly to the pubes, in such a manner as to press the abdominal viscera backward and downward, add to this condition the doubled shape and semi-reclining posture, and we can hardly conceive of a condition more favorable to the displacement of the pelvic organs. It is the duty of

every physician to use his influence for the removal of this evil, certainly no gynæcologist need expect success in the treatment of uterine dislocations, if he ignore the posture of women while sitting, since so much of their time is so passed. A chapter devoted to postural treatment might appear more correctly placed if following the study of pelvic diseases; but we deem it best to place it in the present order for two reasons. First, the study of the principles presented in this chapter cannot fail to suggest the ætiology of some of the abnormalities to be hereafter considered. Second, by a previous comprehension of the subject, we will avoid repetition. In calling the attention of physicians to this subject, our first impulse is to offer an apology for so doing, the mere suggestion should be sufficient to those who have intelligently studied the elements of physiology and anatomy; but observation forces upon us the conviction that this is but one of the many instances where physicians fail to practice as intelligently as their knowledge of the subject would warrant us in expecting. We are prone to extremes; on the one hand overestimating a doctrine, or on the other, neglecting many valuable commonplace practicalities. Again, judging from the expressed views of some practitioners, the rationale of postural treatment is not always correctly appreciated. For instance, the curative action is often limited to the deflexion which various positions of the trunk may give to the body of the uterus; thus, if the patient has what is termed ante-version, a dorsal posture is recommended, with perhaps a cushion placed under the back. Such a restricted view of the principles

involved is extremely faulty and mischievous. Again, other practitioners consider that simply advising a recumbent posture comprises the entire principle; and those who offer this advice seem utterly unconscious that when they instruct a woman to "lie on her back" for a prolonged period, they designate a very objectionable position. Let us examine the matter practically. If we allow an arm to hang motionless at the side for a few moments, we will notice that the veins become distended and the hue of the skin slightly livid. Should we still further impede the return of the blood by grasping the arm lightly with the other hand, there ensues a marked increase of the blood stasis. Should there exist at the same time an inflamed condition of the hand, the turgescence of the tissues will give rise to decided discomfort or pain. Now, if we reverse the attitude of the hand, holding it above the heart's level, we will immediately perceive the effects of gravitation upon the circulation of the blood. When the hand is raised the redness will vanish, and the distention of the veins disappear.

This simple experiment illustrates an important physical law, one which the intelligent surgeon fully recognizes in the management of his cases, but we know that it is not sufficiently respected by gynæcologists, a neglect all the more reprehensible when we consider the physiology and vascular nature of the structures to be treated. The more vascular the parts, the greater are the influences exerted by gravitation. The female organs we know abound largely in blood vessels; the uterus especially is surrounded by a net-work of veins. Beside this extreme vascu-

larity of the pelvic organs, they are so constructed as to be capable of various movements, this marked mobility being necessitated by the functions of these organs, and therefore we see that the posture of the body exerts a double influence upon them. We are familiar with the anomaly varix, as seen in varicosity of the legs; we know that this condition is not produced suddenly, but is in the majority of cases of slow growth. In the early stages there is simply a temporary engorgement of the walls of the veins, which disappears with exercise, or when the recumbent position is taken. If prolonged, the over distention of these blood vessels overcomes the resiliency of their walls, consequently the caliber is increased to the enormous extent often noticed. If the cause of this hypostatic hyperæmia be ignored, effusion of serum into the cellular tissues ensues, with subsequent ulceration of the surface. We are all familiar with this anomaly, it being open to sight. It should be borne in mind that the same influences which have brought about this condition of the tissues of the leg are even more active in originating many of the derangements of the pelvic organs, in which abound a greater proportion of blood vessels than in any other part of the body. How large a part of woman's sufferings are due to this potent factor, malposition, may only be inferred. No one can more fully appreciate the comfort of a position which best favors the return of blood from the hyperæmic pelvic organs, than she who seeks a prone position, the upright having become unbearable. Patients frequently inform us that when sitting, standing, or even lying upon the back has become unendurable, they assume

prostration from the comfort it affords them, although they are unable to assign any reason for this added comfort.

The transudation of serum in a varicosed leg disappears after a night's rest in the horizontal attitude. So also, many women afflicted with dragging sensation, pain in the back, hips or pelvis, are comparatively comfortable after a period of recumbency, which has restored the equilibrium of the circulation.

No intelligent physician will question that the dropsical condition of the uterus and adnexa, so frequently observed, originates in passive hyperæmia of the parts. By some this condition may be regarded as "subinvolution," by others as "congestion," or again "chronic inflammation," etc.; but if we would read it correctly, and treat it successfully, we must act upon the fact that there exists an abnormal collection of blood in the parts, wherein the blood vessels are distended and weakened through the prolonged or repeated engorgement.

The sequences of morbid gravity are usually insidious in their development, but are exceedingly difficult to cure when once established, and their treatment is wholly unsatisfactory, unless proper attention be paid to the removal of those influences which favor this pelvic engorgement. So far and wide-spread are the influences of blood stasis that we are justified in asserting that when thus complicated, every function of the pelvic organs is more or less perverted, and that a majority of the ordinary ailments peculiar to women are largely due to embarrassed circulation. This passive hyperæmia of the female pelvis is of two forms, hypostatic and mechan-

ical; the two causes are usually associated. In a previous chapter we have studied the topography of the female trunk and pelvis; we noticed that in the vertical posture of a correctly poised body, the abdominal viscera rested upon the pubis and anterior abdominal wall, and that the uterus reclined against the bladder, being shielded by the prominence of the sacrum. So long as this truncal bearing is maintained correctly in either sitting or standing, the pelvic organs are protected from the pressure of the intestines; but should the abdominal muscles become relaxed through weariness, carelessness, habit or occupation, and advance the thorax so as to destroy the normal bearing of the body—the axis of the body is no longer through the pubic bone, but through the vascular, movable pelvic organs, and yielding floor of the pelvis. With the gravitation of superimposed weight into the pelvis, there ensues more or less stagnation and displacement, in proportion to the amount of pressure incurred. This will explain the circumstance that so many working women will assure you that they cannot sweep the floor, stand at the ironing-table, run the sewing-machine, or perform other duties that necessitate a similar posture. The slightly stooping attitude in sitting or standing assumed in the above named occupations is eminently injurious, but when extended to that of prostration, is no longer fatiguing, but on the contrary restful, as the weight of the abdominal viscera then falls above the line of the pelvic plane. Hence we find the woman, who cannot endure sweeping the floor, will perform the act of scrubbing for hours without complaining, and from

this humble act we derive instruction. The nearer the attitude of a quadruped is assumed by woman, the more impossible becomes any suffering from prolapsus uteri, therefore this position occupied occasionally, is excellent as a remedial agent.

Let us study the posture of the generality of the women of the higher classes, and note what bearing this may have upon our subject. We have previously censured the style of the modern chair, and remarked that the favorite sitting posture of the women of today is one half reclining and half sitting. In this position the weight of the abdominal viscera and relaxed abdominal wall (often an important consideration) falls a dead weight upon the pelvic contents, and against the blood vessels which extend along the dorsal region; hence the pelvic organs not only are weighed down, but stagnation is also increased by the pressure upon the vena cava and portal vein. The chairs are so padded and cushioned that the occupant may retain this position indefinitely without other discomfort than that produced by obstruction of the circulation. The undefined sensation of non-support to the pelvic floor prompts many women to double the leg under them, thus enabling them to sit upon the foot, and thereby secure a slight counterpoising pressure. When we consider how much time is spent in this languishing position, either sitting at home or driving in padded carriages, it is no wonder that the monthly and other physiological engorgements soon pass the boundary line into the pathological, and the sufferings of women will be augmented and perpetuated just so long as these evil devices and debilitating habits are

persisted in. The correct attitude in sitting or standing has been presented, and it may not be inappropriate in this connection to suggest the form of chair best suited to insure this posture. A stool or divan without any support to the back is unquestionably preferable, since it permits free sway of the trunk, and demands an equipoise of all the muscles. When a rest is supplied for the back, this muscular balance is destroyed. If we cannot altogether dispense with the present form of chair, we should select one with an upright, slightly convex back, that the vertical posture may be maintained, and the normal curvature of the spine at the same time preserved. It should also possess a firm, cool seat, since upholstery furnishes a warmth that is decidedly enervating. Those who drive frequently should be instructed to avoid reclining, it being highly injurious and fatiguing. Men whose duties necessitate constant driving instinctively avoid any propping of the body with a back rest, having learned from experience that the unrestrained upright position can be maintained many consecutive hours without fatigue, which would not be the case were the semi-reclining posture adopted. Finally, women should as much as possible avoid sitting, and this advice becomes imperative when applied to those suffering from pelvic derangements. A woman may walk, or even ride on horseback, when afflicted with these disturbances, without experiencing any serious inconvenience; but motionless sitting will always prove fatiguing and injurious. She should therefore assume recumbency when quiet.

The position while reclining is an exceedingly important consideration to the gynecist, since it is

frequently resorted to as a remedial agent. If we look about and study the habits of animals, and the customs of the uncivilized races, we will notice that the semi-prone position is the one naturally and almost universally adopted. Young children invariably assume this position and require to be educated to the unnatural one of decubitus. Anatomy furnishes us with an explanation for the preference given this attitude. In the bodies of all mammalia the large blood vessels, important organs, and secretory glands are placed along the interior surface of the posterior truncal wall. In front of these are placed the intestines, while the anterior wall of the trunk is pliant, and is also covered with a deep layer of fat which serves admirably as a cushion upon which to rest, and at the same time is a remarkable non-conductor, thereby affording protection against the earth's cold and dampness, and enabling the body to retain its animal heat. The dorsal wall, on the contrary, not only gives attachments and support to the important glands and blood vessels but it also contains the spinal cord, and is comparatively rigid, not like the abdomen supplied with such a proportion of adipose tissue. In the dorsal position the weight of the body rests upon a few prominent points, back of head, shoulders, hips, etc. The weight of the abdominal viscera and abdominal wall presses upon the blood vessels distributed along the dorsal wall, and embarrasses the circulation. Through gravitatory influences the spinal cord also becomes more or less congested, just as a pendant position of the head will induce determination of the blood to the brain.

Let any one watch the unsightly spectacle of a sleeper in the dorsal position. The open mouth, stertorous breathing, dry tongue, muscular twitchings, groans, nightmare, and sensation of fatigue on awaking, all protest against this violation of nature's law. While this posture is detrimental to both sexes, it is particularly so to the female; her hips being the heaviest portion of her body, naturally sink deeper into the couch — and from the backward curving of the sacrum, the pelvic basin is much the lowest part of the body — and owing to this depressed condition, and the vascular nature of its contents, it is made a receptacle for the gravitating fluids and the impeded blood. More than this, the bladder becomes largely distended with the constantly accumulating urine; consequently we have the enlarged bladder as well as the intestines resting upon the hyperæmic uterus and its adnexa. Now it is evident that if the semi-prone position be assumed, all these evils are corrected. The breathing becomes tranquil, the muscular contortions cease, nightmare (that imp born of stagnation) disappears, and the embarrassed circulation is relieved. The pelvic cavity is inverted, and therefore prevents the possibility of the pelvic engorgement, and the relation of uterus and bladder is reversed. In every sphere of life women should be enlightened upon this matter of correct posture, for thereby much suffering may be averted. The gynæcologist will find in this principle a valuable auxiliary in the treatment of all abnormalities of the pelvic viscera.

Since many of the ordinary diseases of women which often baffle drug treatment are but the sequence

of congestion, augmented and perpetuated by gravitatory influence and inaction, exercise should occupy a prominent place in the gynecist's list of remedial factors. This agent plays a very important part in the management of uterine diseases. We can in a measure realize its importance as a developing medium, when we note the result of exercise, as exhibited in the arm of the smith or leg of the pedestrian; on the other hand, the evils which arise from its neglect are shown in those limbs which through accident have been disabled for a length of time. In the majority of women who suffer from pelvic weakness, there is a noticeable atony of the entire muscular system, with a corresponding aversion to physical exertion. The limbs, albeit they are plump, are deficient in striated tissue, the plumpness being due to an abundance of adipose matter. Such women are usually pale, or of waxy complexion, and the skin displays ecchymosis upon the slightest provocation, thereby demonstrating insufficiency in the capillary tonicity. They are easily wearied, in fact are habitually tired, this arising from the circumstance that the sustaining tissues are wanting. Now we recognize that a law which is applicable to one portion of the human body, holds equally true throughout the entire economy. Nature, though amply provident, is nevertheless frugal, bestowing her gifts most generously upon those who wisely employ them, but withdrawing them upon abuse or neglect. We find therefore, in inactive women, limbs enfeebled, and in a condition similar to that which is produced by accident or illness; nor is this atony manifested in the limbs alone, but every portion of the body suf-

fers deterioration, while a disposition to passive congestions is engendered through the debilitated state of the capillaries, this being one of the consequences of inaction. When we remember to how great an extent the tissues are made up of capillaries, and that the health of the body depends upon their integrity, we more fully recognize the significance of our subject. For instance, we know that an abnormal amount of blood in any part of the body constitutes disease; this increased amount may be active or passive, but in both conditions, it is attributable to a weakened and dilated state of the walls of the capillaries. In the former, however, we may have a recuperative action in progress, but in the latter, there is ever a process of degeneration going on.

Lack of exercise by enfeebling the capillaries produces a general condition of blood stasis, which is a form of death. By exercise we secure the constringing of these minute blood carriers, through the alternate contraction and relaxation of the tissues in which they are imbedded. Exercise not only stimulates the capillaries, and impels the venous blood toward the heart, but it also increases the action of the absorbents, hence the result is the better elimination of the broken down cells, which otherwise would remain to impede healthy tissue formation. Some pathologists maintain that there is but one essential proximate cause of disease, *viz.*: loss of vital resistance and the enlargement of the capillary vessels. This being the case, the indications would be that the cure of disease must necessarily largely depend upon those influences which best secure the healthful constringency of the capillaries, and a restoration

of their resisting power. To enter into a consideration of the physiology of exercise in detail would necessitate a *résumé* of the laws of nutrition, so intimately are the two related.

We are familiar with the effect of physical exertion upon the respiratory organs. With increased respiration, there is necessarily a proportionate increase in the amount of oxygen appropriated; consequently, there must be a more complete purification of the blood, through combustion of its effete products. The anatomy of the veins teaches that the return of the venous blood depends greatly upon the stimulus afforded by the alternate contraction and relaxation of the muscles. Not only is the circulation of the blood accelerated, but the effete cells are dislodged, and impelled into the efferent canals. To recall more forcibly the importance of exercise, we should remember that a man under ordinary circumstances, and in the quiescent state, will inhale four hundred and eighty cubic inches of air per minute. When walking four miles an hour, the quantity is increased to two thousand four hundred cubic inches, and at six miles an hour, to three thousand three hundred and sixty cubic inches, being nearly eight times as great a quantity as when inactive. Of course the amount of carbonic acid in the air exhaled is proportionately increased, and every excretory is stimulated through muscular activity; hence the system is freed from the impurities that otherwise would induce disease, and healthy tissue metamorphosis is secured. It is a well recognized fact that a far greater proportion of women are invalided than men, and we believe it

reasonable to attribute this disparity to the restricted amount of exercise taken by them. Among the lower animals, it is certain that the female enjoys greater immunity from disease than the male; and while not so powerful, yet possesses greater endurance and is longer lived. There is no valid reason why the sexes of the human species should not sustain the same relative standard of physical vigor that exists among the lower animals, and also no reason why the female of the human species should not enjoy freedom from accident during parturition in common with the lower order. We firmly believe that many of the accidents peculiar to childbirth are due to a fatty degeneration of the parts involved, this being the result of inactivity.

Through bodily activity and deepened respiration we prevent obesity, which is a recognized abnormality and source of disease. Fat is merely the product of debris and non-vitalized carbonaceous material, which by its pressure induces atrophy of the muscles, and by its substituting propensity, destroys the contractile fibers. We might continue to speak at length concerning the importance of this potent factor (exercise) as applied to the generative organs of women, but the physiological inferences are too evident to demand further discussion. We must be pardoned for so fully referring to these well-known principles, but it is an accepted truth that we fail not so often through ignorance as through neglecting to make timely use of the knowledge we possess. In our experience we are often called upon to witness the restorative powers of an active life as frequently exemplified in the case of some chronic invalid,

who, through reverses of fortune, is compelled to support herself by her own exertions, thereby receiving incalculable good through this enforced activity, and in being provided with a direct object in life.

Exercise, to be advantageous, must be judiciously employed; for the invalid may become seriously injured from overexertion, through a faulty conception of its principles.

It should be begun cautiously and moderately; practised rationally, and increased gradually with the acquirement of strength. No overfatigue should be permitted, and the patient should always be induced to assume for a time the semi-prone position, and to take a complete rest after each effort. The lesson taught by the ingenious lifting-machine (now unfortunately falling into disuse) furnishes some valuable suggestions. The prescribed regulations for the use of this instrument are all that could be desired. The perfectly erect poise of the body while lifting, and the rest enjoined after each exertion, are rules based philosophically, and aptly illustrate the regulations which we insist upon in other forms of exercise. A prolonged tension of the muscles, or a strain with the body incorrectly balanced, will oftener be injurious than helpful, while the alternate contraction and full relaxation of the muscles in their normal equipoise cannot fail to work happily in securing a healthy elastic tone to the entire body. Activity within doors may be somewhat better than positive inactivity, but it is never as beneficial as brisk outdoor exercise in the bright sunlight, with every respiratory and muscle in full play, and the mind at the same time pleasantly occupied with the panorama

that is ever spread before us. In closing our remarks upon exercise, we will present an extract from an article entitled "The Health of American Women," by Dr. Dio Lewis, than whom we have no better authority upon this subject: "The Boston Normal School for Physical Education, trained and graduated four hundred and twenty-one teachers of the new school of gymnastics. The graduates were about equally divided between the sexes. A considerable proportion of the women were school teachers in broken health, seeking in the new profession a better means of living. The average health of the women was, in the beginning, lower than that of the men. But with the removal of the corset, and the long, heavy skirts, and the use of those exercises which a short and loose dress renders easy, a remarkable change ensued. In every one of the ten classes of graduates, the best gymnast was a woman. In each class there were from four to six women superior to all the men. In exhibiting the graduating classes from year to year on the platform of Tremont Temple, women were uniformly placed in the more conspicuous situations, not because they were women, but because they were finer performers."

The hackneyed subject of dress reform needs only a passing notice here, as it has already been so frequently and fully discussed. Physicians must marshal a stronger force than mere reason and common sense to successfully combat woman's pride and the dragon Fashion; therefore, we will speak very briefly of two or three of the most objectionable features of the subject. The high heels, so commonly

worn of late years by many women, are a most fruitful source of internal derangements; the body being thrown entirely out of its natural poise, changes the center of gravity in the body, thereby producing pelvic dislocations. Heels should never be placed near the center of the foot, but even with the back of the foot, and care taken that they be kept square and not allowed to run down at either side. Another injurious habit is that of wearing the skirts fastened at the waist, compelling the hips to carry the weight that should be borne by the shoulders, a matter easily arranged by properly adjusted straps. It really appears as though, in the matter of dress, women diligently studied in what manner they can most fully frustrate nature's designs. The heart, liver, spleen, lungs, and stomach are admirably situated within the thoracic walls, whose beautiful mechanism makes it apparent that while it is a necessity for the welfare of these organs that they be protected from compression, free lateral expansion is also indispensable for the proper performance of their functions.

Nevertheless, in defiance of these obvious, vital laws, women persist in girting the trunk in such a manner as to completely destroy the normal play of the thoracic walls. Nothing could be more entirely calculated to destroy the health, than those evil, constricting contrivances called corsets. Nature would have the broadest portion of the thoracic cavity looking downward, and the more elastic portion of the waist is indicated by the floating ribs and the admirable termination of the lower ribs in the costal cartilages. Women, however, adopt measures diametrically opposed to this plan, and proceed to

constrict the widest portion of the thorax, and swathe the trunk in such a manner as to prevent the elevation and depression of the ribs, and so effectually preclude the lateral expansion of the thorax. Not content with binding the waist, the wretched device is so constructed with steel and bone-splints as to exert pressure over the abdominal walls, so that the normal resiliency of the abdominal muscles is not only hampered, but the viscera are also crowded upon. The evil tendency of all this is very plain. Through the restriction of the respiratory organs, the physiological processes of assimilation and elimination are imperfectly performed. The pressure exerted upon the liver and other structures impedes the circulation and thereby induces blood stasis of the pelvic organs. Not only are the abdominal structures compressed and crowded toward the only remaining yielding point (the pelvic floor), but all sudden movements, deep inspiration, coughing, laughing, sneezing, etc., send a concussion directly through the pelvic organs. While the wearer is sitting or stooping, the abdominal end of the corset exerts an extra digging pressure against the supra pubic structures in such a manner as to impinge against the uterus and bladder, crowding them downward and backward. Nevertheless, demonstrate these truths as lucidly as we may, ninety-nine women out of a hundred will listen complacently, and still persist in this wretched practice. So then the subject of tight lacing is almost a hopeless one from the fact that it is impossible to find the woman who laces. She may wear her corsets so tight that she resembles nothing so much as an inverted cone, but she will assure you with particular earnestness

that "her clothes never do anything more than just touch her." There is one result of tight lacing I have never known to be commented upon but have frequently observed, and this is the atrophy of the muscles over which the pressure exists. It is not unusual to find merely a vestige of these muscles left, where normally they are strong and prominent. In fact tight lacing of the trunk produces precisely the same local results that we observe from the bandaging of a limb. It is not strange therefore that we so frequently discover distorted spines with their accompanying symptoms. If the fatal consequences of these outrages upon nature's laws could be confined to the perpetrators it would not be of such grave importance, but when we think of unborn generations who will be the sufferers it is most deplorable.

The manner in which defecation is accomplished is a subject demanding our most careful attention. Women suffer from constipation much more frequently than men. This probably is due to their sedentary habits, and also to an innate propensity to procrastinate the act. We are frequently informed by patients that they do not evacuate their bowels oftener than once or twice during the week. When these sufferers from constipation are forced to defecate, the act is accomplished with great difficulty, and after long expulsive efforts followed by dragging uncomfortable sensations sometimes amounting to severe pain. This causes them to dread the next evacuation, and consequently the next interval is extended to as great a length as possible. It is safe to state that rarely do we find a case of prolapsus uteri that has not been in a measure incited by, and greatly

augmented through constipation. The evil tendency of this forcible defecation is most clearly apparent. When a woman assumes the squatting position, the spinal curves are straightened and the axis of the body is no longer through the os pubis, but directly through the pelvic organs to the vulva, and consequently every expulsive effort has a direct tendency to expel not only the contents of the rectum, but the generative organs as well. In proof of this—it is not unusual to treat patients afflicted with costiveness and pelvic discomfort, who confess that in order to accomplish defecation they are obliged to exert themselves to such a degree, that the os-uteri presents itself at the vaginal outlet. Not only are the uterus and bladder forced out of position by these efforts, but the tissues throughout the pelvis are rendered turgescient, and as these tissues are composed largely of blood vessels whose walls are weakened by repeated dilatation, a state of chronic blood stasis is inevitably the result. When we reflect upon the length of time which constipation exists with most of these women, we cannot wonder that the pelvic organs finally succumb to this oft-repeated injury. Constipation may be defined as follows: An inertia of the lower part of the descending colon, induced by the use of cathartics or the rectal douche and occasionally through neglectfulness. If every purgative of whatever nature were abolished, if rectal douches were unknown, if there could be a total cessation from the use of pernicious drugs, and physicians taught implicit obedience to nature's laws, humanity would be spared a vast amount of suffering. As every drug yields its primary and secondary effect, the secondary being the

more permanent, so without a single exception every cathartic creates constipation. Drug effects are also peculiar in this respect, that while by repeated administrations the system becomes so inured to the primary effect, that the drug which at first is quite effectual, becomes almost inert, the secondary effect on the other hand increases with the continuation. We are constantly consulted by patients whose condition has been rendered miserable in the extreme by the use of cathartics, often administered by those whose duty it is to correct the evil, which their medication actually produces. Despite traditional medical custom, observation certainly should point us out a better path. The syringe is frequently substituted for the drug, and soon the rectal secretions are destroyed by the artificial lubricants, and the rectum is rendered passive as a leathern tube. We lay this down as an axiom, that laxative drugs, and rectal douches, yield their most brilliant results when employed for the cure of diarrhœas.

How then can we best deal with this anomaly constipation? First it is imperative that the use of both the cathartic and the syringe be entirely discontinued, and as no other method can succeed if accompanied by an occasional use of either, this rule must be strictly observed. The expulsive efforts must also cease and the peristalsis of the bowels be cultivated and relied upon. To this regime add an assortment of coarse food, such as cracked wheat, maize, and what is more effectual than either, rye meal. These well boiled and eaten with treacle will be found to meet the exigencies of the case, and with punctual daily attendance at a definite time, will generally be all that will be required. This course must

be persisted in for several successive days, but when once the daily habit is established, a relapse can only be brought about through neglect, or a return to the former causes.

We have already commented upon the mobility of the bladder, also upon the fact that anything inducing a weakening and sagging of the pelvic floor, will permit a bulging downward of the vesico vaginal septum, with a consequent depression of the bladder and uterus, and when once the bladder has lost its natural poise over the pubic bone, a prolapse is only a question of time. That an habitual overloading of the bladder is a fruitful source of prolapsus is highly probable. It is certainly a much more plausible theory than that of "subinvolution" (if we may exclude the degeneracy of the tissues, that is always associated with "subinvolution"). The weight of a normal uterus is given from one to one and a half ounces, and a subinvoluted uterus is seldom twice as great, yet we know that the female bladder is usually made to carry from eight to twelve and frequently sixteen ounces. The tendency of habitual distention of the bladder as well as the remedy is too apparent to demand further comment.

CHAPTER III.

HAVING cited some of the principal influences in which pelvic disturbances originate, we will next consider the treatment of a few local abnormalities of the generative organs. The ancients originally taught that the unimpregnated uterus was an extremely wayward organ, wandering to and fro throughout the female body, oftentimes rising to the throat, thereby causing a choking sensation. While we may not accept this obsolete doctrine regarding the migratory power of the uterus, still we recognize that it is extremely unstable, constantly changing its position with the filling and evacuating of adjacent organs, and deviating more or less with the variations in truncal bearing. During the menstrual life it is perpetually changing physiologically, so that this organ is never completely at rest. The action of the diaphragm in talking, laughing, sneezing, coughing, sighing, etc., also for the moment affect its position.

The grand function for which the uterus is designated necessitates this manifold mobility, hence we find it as unrestricted as a buoy anchored in the tide. Unfortunately, though endowed with this freedom of deviation, it possesses very slight self-readjusting powers. Therefore, while a normally conditioned uterus virtually floats anchored in the pelvic basin, it

readily topples over and sinks when weighed down by its own engorgement and superimposed weights. Especially is this the case when the tissues that are intended to buoy up the uterus, become relaxed and degenerated through morbid processes, and thereby not only fail to sustain that organ, but drag upon the uterus through their own deviations. We have already seen in what manner the pelvic tissues become deteriorated through lack of proper understanding and obedience to nature's laws. Perversion of vital forces, faulty truncal bearing, inactivity of the body, blood stasis, imperfect involution following parturition, dress, etc., all contribute toward the production of pelvic abnormalities. Therefore when we are called upon to treat a case of uterine displacement, we will by intelligent examination notice that not only is the womb abnormal as to position, but its tissues and also the neighboring ones are abnormal. Not only will we observe the absence of vital tone locally, but we will often detect a general atony throughout the system. When practically and successfully based, our first thoughts will not be directed to the selection of a mechanical support for the replacement of dislocated parts, but to the institution of means whereby the natural vitality of the entire tissues may be restored and maintained. This will embrace the whole field of hygiene. We will not recapitulate those hygienic influences already referred to in previous chapters, but simply reiterate that these suggestions must be kept prominently in view and faithfully practised before we will experience success in the treatment of local abnormalities. The employment of artificial supports for deflexions of the uterus, is at best a necessary evil and

in the majority of instances but a questionable expedient. At all times mechanical appliances should be regarded as auxiliaries to the more general and philosophical treatment. The physician who depends principally upon the action of a pessary for the restoration of a dislocated uterus to its normal position, will encounter defeat. Month after month, year after year, the pessary is worn, and all this time the tissue degeneration is progressing, so that whenever the mechanical support is removed the inefficiency of the parts is found to be augmented, and the malposition more readily returns. To prescribe a pessary is always a serious matter for two strong reasons. First, a foreign body pressing against the tissues and substituting the natural maintenance induces atrophy of the walls of the vagina, loss of tonicity and other local disturbances. Another ill effect is the production of a peculiar morbid mental condition, in the patient, generally taking the form of a firm conviction that she is the victim of a grave physical deformity. This thought has an unfortunate influence and is often most difficult to banish. The importance of uterine deviation *per se*, is too often overrated, for it does not always follow that a displacement of the womb must necessarily produce marked local or general disturbance, as for that matter the position of the uterus may oftentimes, and correctly, be regarded an individual peculiarity. We sometimes discover clearly defined uterine abnormalities as regards condition and location, without their having caused any inconvenience to the patient. Neither is the amount of suffering endured always commensurate with the degree of deviation; often a slight displacement causing

marked symptoms of disorder, while on the other hand a complete procidentia may not produce proportionate discomfort. The natural tendency of positive uterine deviations, however, is a steady progression from bad to worse, unless the inciting causes are detected and properly treated.

It will be impossible to adopt any stereotyped rules in the premises, since the influences which contribute to the anomaly are so manifold and varied. It is our first duty to inquire minutely into the history, habits, and general health of those who seek relief for uterine displacements. We will often learn that the evil had its origin in a miscarriage, or an imperfectly managed labor. If the patient be a virgin we will probably find that the menses are performed too profusely and painfully, and that during some one of these periods she has failed in taking proper care of her health, either over-exerting, climbing stairs, unusual long walks, or dressing improperly. The occupations of these patients play a most important role in pelvic dislocations. It may be that one is compelled to occupy steadily for many hours a day, a place at the sewing machine, or some other duty necessitates a similar inactive position. In every case we must devote especial attention to the general treatment before entering upon any active local interference. Should there be a state of engorgement or imperfect involution, the appropriate treatment of rest in the semi-prone posture, with a judicious amount of daily exercise will do much toward the restoration of the parts to their normal condition. In every case where prolapsus of the uterus exists in any degree, due precaution should be

taken during the menses, and the patient should occupy the recumbent position at this time. Particularly should this be observed where there is a tendency to profuse menstruation, since the conditions which permit an increase of the flow, are usually those of relaxation and engorgement.

We must remember that the uterus is not the only part enlarged and congested during the catamenia, or in subinvolution following parturition or abortion. Every part of the soft pelvic structures is invaded in the disturbance, so that the influences favoring engorgement, and enfeebling of the uterus, operate in like manner upon the pelvic tissues throughout. Therefore preceding any dislocation of the uterus, we often have engorgement with subsequent relaxation, indeed we believe that prolapsus of the pelvic organs is invariably preceded by the degeneration of the vaginal and subpelvic structures. Not only do we observe this local atony, but these patients usually present a general laxity of fiber. For the restoration of the vital tone, we must make use of all the resources we have at our command. The anæmic pallid patient who enjoys but a modicum of fresh air and sunlight, is seldom benefited by the mere use of chalybeates, or other drug tonics. Such cases must be treated with the appropriate amount of out-door exercise, which will enrich the blood and invigorate the tissues throughout the entire body. We should remember that exercise in the open air and sunlight, dispels numerous morbid conditions that foster debility, among which are indigestion, constipation, sleeplessness, despondency, etc. The prescribed exercise must be judiciously employed, for if inaugurated

too vigorously it will be likely to defeat our efforts. It must be increased gradually from the daily walk of a few minutes, to an hour or more. It is best that this be taken in the early part of the day, and should always be followed by a period of rest in the horizontal semi-prone position. If any engorgement of the pelvic organs exists, the knee and chest posture should be occupied for ten or fifteen minutes preceding the rest and succeeding the exercise, and also previous to retiring for the night. This will not only accelerate the disengorgement of the pelvis, but it will also elevate the depressed parts, and allow the relaxed and enfeebled tissues an opportunity to resume their contractility. A hot saline douche thrown into the vagina occasionally, and followed by a dash of cold water, will relieve engorgement and promote tonicity of the small blood-vessels. Pledgets saturated in glycerine and placed in the upper portion of the vagina, will also deplete the parts by a profuse transudation of serum; this depletion, however, is only temporary, and when employed too frequently results in debility. When rapid reduction of hyperplasia of the parts is desired, the glycerole followed by the hot douche is quite efficient, but its prolonged or oft-repeated use we believe to be detrimental.

In prolapsus great care should be exercised to maintain regular daily evacuation of the bowels without expulsive efforts, or the aid of purgatives, for reasons heretofore explained. It is hardly necessary to suggest in this connection, that all restriction of the waist by lacing, or weighing down of the hips by the skirts must be discontinued.

A careful attention paid to the above sugges-

tions will in the majority of instances be all that is required; still there are cases demanding something more than a regulation of natural laws, for the dislocated uterus that is readily replaced, and will remain in position during recumbency, may resume its malposition as soon as the erect attitude is assumed, and the irritation directly caused by the malposition will serve to perpetuate the difficulty. To aid the enfeebled tissues in retaining the uterus in position, we are often compelled to employ mechanical support, but before resorting to the use of a pessary all tenderness and inflammatory action must be removed. This is best secured by the combined use of hot vaginal douche, glyceroles, and rest as above suggested. When the duties of the patient prevent quietude in the semi-prone posture, great relief may be afforded by replacing the uterus and then adjusting properly in the upper portion of the vagina, a tampon of borated cotton, holding in its center a crystal of alum about the size of a hazel-nut, and thoroughly moistened with pure glycerine saturated with alum. This forms an efficient non-irritating support, which usually may be retained several days with great advantage, the alum acting not only as an astringent, but as an admirable disinfectant. The writer has removed these pledgets a week after insertion, and found no unpleasant odor noticeable, and the alum crystal diminished but a trifle. We cannot speak too highly of this simple support since in the generality of cases requiring temporary treatment it fulfills all requirements.

The subject of artificial support to the uterus, is one that has engendered more controversy than any

other connected with our subject. Not only has there existed a wide diversity in the opinions of medical men regarding the propriety of employing pessaries, but opinions respecting their construction have been extremely varied. As a result of this we have presented to the profession, a multitude of unseemly and contradictory inventions, the design of many of which would puzzle a physician if unaccompanied with a verbal explanation. This vast array of pessaries is a blot upon the history of gynæcology. To lengthen this catalogue is assuredly a graceless task, and one may hesitate to approach the subject with any new suggestions. We have no desire however to present anything that will conflict in the slightest degree with the most conservative and practical views. We wish to assert most emphatically at this point, that we do not unduly extol the use of any form of pessary for the cure of prolapsus; the best designed pessary can but serve as a temporary assistant, and should be so regarded by the patient as well as physician.

An intelligent construction of this appliance demands in the first place a correct knowledge of the anatomy and mechanism of the pelvic organs, and the artificial support should be moulded in such a manner that when inserted the natural relation of all the parts shall be maintained. The extreme elasticity of the vagina, by no means justifies the action of crowding it with such unsightly twisted abominations, as we so frequently see recommended and employed. We hold that it is as important to maintain as far as possible, the normal relations and coaptation of the vaginal walls, as it is to

restore the uterus to position. When we insert a foreign body that dilates the vaginal canal and presses unduly upon its tissues, we not only destroy the resiliency of these tissues, but the neighboring parts are also seriously disturbed. If this foreign substance be retained for some time, the parts impinged become atrophied so that upon the removal of the bulky instrument we find that the surrounding textures are noticeably more relaxed, and weakened, than when the instrument was inserted. A prolapsus of the uterus should be regarded as nothing different from a hernia, the vaginal slit and surrounding tissues constituting the canal and ring. How would we regard that surgeon who attempted to cure an inguinal hernia by application of means which unquestionably enlarged the canal and wasted the surrounding tissues? Nevertheless this is precisely what the majority of pessaries accomplish.

Those who carefully study the topography of the pelvic organs will notice that the cervix is within an inch and a quarter of the sacral wall, and the os looks backward and downward toward the coccyx. (See Fig. 4.) In all forms of prolapsion, including retroversion, we will find that the vaginal tissues surrounding the cervix are flaccid and advanced toward the introitus, causing the os to look toward the vulva, while the cervix loses its position near the sacrum, and gravitates toward the outlet, and the fundus falls backward. If the texture of the uterine body be normal it is evident that prolapsion cannot occur so long as the cervix maintains its normal situation. When however the cervix advances sufficiently to approach the line of the pelvic curve, the uterus

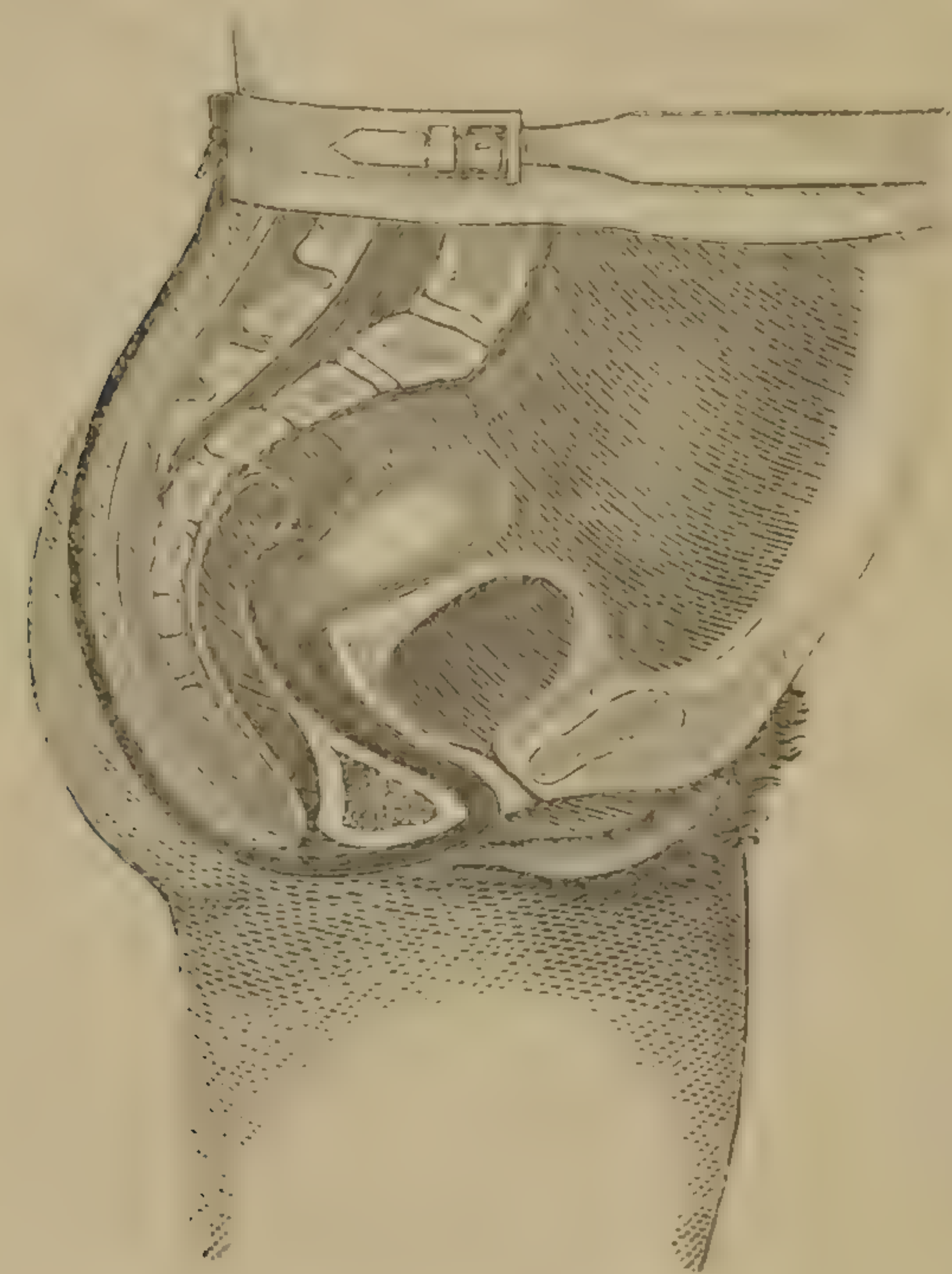
loses the protection afforded by the sacral arch, and gravitation, superimposed structures, and other influences, all favor its retroversion and expulsion. When prolapsion originates with the anterior dislocation of the cervix, it follows that the reduction of the cervix to its normal situation is the first step in the treatment. Therefore we select an instrument so constructed as to convey the cervix back, and retain it in the hollow of the sacrum, when if the uterus be not flexed, the fundus will fall forward against the bladder. At the same time it should also strengthen or sustain the floor of the bladder, as a bulging downward of the vesico vaginal septum, drags the cervix forward. It should accomplish these results without pressing upon the vaginal tissues at any point, since pressure produces atrophy, dilation and irritation. It must not press against nor environ the uterine neck, for thereby various and intractable complications would be induced. It should not irritate the patient, for the pessary that constantly reminds the wearer of her affliction, is almost sure to prove a failure. Finally, it must be as manageable as a crutch, which can be used or discontinued by the patient as symptoms may indicate. The instrument which the writer has found to best fulfill the foregoing requirements is a modification of Cutter's loop pessary and is constructed as follows:

A copper wire loop so bent as to conform to the curves of the vagina and to the perineal angle is covered with polished flexible rubber. Continuous with this covering, is a light, highly elastic tube, to be attached to a band surrounding the body. The advantages of this instrument are apparent. It can readily

be moulded to any desirable shape, and being smooth and soft it does not irritate or abrade the tissues at any point of contact. The selection and manipulation of the instrument are important considerations. The length of the pessary should be the normal measurement from the pubic arch to the cavity of Douglas' cul-de-sac, plus half an inch. It should never be so long nor so wide as to encroach unduly upon the tissues at any point. After the instrument has been correctly moulded it is lubricated with a solution of Castile soap. (Grease should never be employed, as it kills the rubber.) Then with the patient in Sim's position, or in the knee and chest posture, insert the pessary with its funestra looking toward either labia. Press the



ADJUSTABLE LOOP PESSARY.



LOOP PESSARY ADJUSTED.

lower extremity well toward the pubis, and cause the distal extremity to traverse the posterior vaginal wall, until it has passed beyond the uterine neck. Now rotate the instrument properly, *i.e.*, so as to cause the tube to fall between the nates, and when it is correct as to length, the approximate extremity can be pushed in behind the

pubic arch. Should this manœuver be impracticable, the pessary is either too long or has been imperfectly inserted. Finally place the pessary squarely upon the vaginal floor by drawing the tube back and attaching it to the band which has previously been adjusted around the patient's body just below the crests of the ilia. Care must be taken to make no unnecessary traction upon the tube, all that is required being sufficient constant tension to lift the weight of the pessary. These directions should be strictly followed, as otherwise the distal extremity of the instrument will be found in front, instead of behind the cervix. This style of pessary fulfills all the requirements of a prolapsus pessary, and need be worn only while the patient is in the upright position, thereby avoiding the inconveniences and injury wrought by any instrument that is worn constantly. Every patient should be taught how to adjust and remove the instrument for herself; it can then be worn only when absolutely required, and can gradually be discontinued as the parts regain their tonicity. Every physician is aware of the utter futility of expecting any lasting benefit from the use of an internal vaginal pessary worn permanently. After a prolonged continuous wearing of those most perfectly fitting, we have removed them only to find that the tendency to prolapsus was augmented, while not unfrequently the persistent irritation caused by the presence of the foreign body, has developed chronic hyperplasia of the pelvic organs. It is well known that the constant pressure of a hard substance often produces very troublesome ulcerations, or the patient may be lost sight of or forgotten while wearing a pessary and the instrument burrow itself into

the parts, and cause fistula or other distressing accidents. From all these objectionable features the externally supported pessary is free. We do not deny that a well adjusted pessary sustained by the vaginal walls, does afford more satisfaction at the time of insertion, but the final results should be taken into consideration, and guide us in our method of treatment.

We need scarcely waste a moment's consideration upon the anteversion pessary, as it is deserving of nothing but condemnation. We have never yet witnessed any benefit arising from its use, and we have seen considerable suffering caused by its presence. In its design it is wholly impracticable, and this judgment is the one passed upon it usually by all who have given it a fair trial. Recent anteflexion must be treated simply as a form of prolapsion. We believe it safe to state that acquired anteflexion unaccompanied with inflammatory processes, never occurs without first a weakening of the vaginal walls, and subsequent advancement of the neck of the uterus: for in anteflexion of the uterus we find the cervix uteri in the same position as in retroversions. We must also remember that the term "anteversion" is a deceptive one, as the uterus in normal position is decidedly anteverted; this being the case we can easily understand that physicians who, from incorrect teachings, entertain faulty ideas of the physiological position of the uterus, may recognize in the normal position a deformity, and resort to incorrect treatment. Instances of these injurious proceedings are by no means rare, and we will briefly cite one case. Miss L., a young lady twenty-three years of age, consulted the writer, for painful menstruation. She had been

under the treatment of a gynæcologist of considerable distinction, who had pronounced her case one of anteversion, and had advised an anteversion pessary, which she had worn for two years, not only without experiencing any relief, but with an increase of suffering. After wearing the pessary several months she expressed herself as having a "gone feeling" upon its removal, which encouraged her to continue its use. The perinæal body was found considerably atrophied, and the vagina much dilated from the pressure of the bulky instrument. The uterus was in its normal position. The pessary was removed, and exercise in the open air, walking and horseback riding recommended. For a time the feeling of "support" which she had experienced from the presence of the pessary was missed, but this soon disappeared. No displacement of the uterus followed, and the menses were soon performed painlessly. When quite restored she again visited her former medical attendant, who once more declared she had an anteverted uterus and advised the replacement of the pessary, which she of course declined. Now we believe this physician to have been thoroughly honest in his convictions, and this case is only one of many who are enduring needless suffering at the hands of well meaning but mistaken practitioners. When we take into consideration the diameters of the female pelvis, and the relation of its contained organs, we feel fully justified in asserting that the pathological term "anteversion," as usually applied, is deceptive and illogical.

The etiology of anteflexions of the uterus (unaccompanied with phlegmonous process) is first a curving of the uterine neck, produced by a prolapsing of the

vaginal walls, causing the uterus to assume the form of a retort, which deformity is increased with the continuance of the predisposing causes. The statement therefore sometimes seen in our text-books, that "the cervix usually moves somewhat in the opposite direction to that taken by the fundus" is incorrect for the os in anteflexions, when complicated with vaginal falling, is found looking toward the introitus. This being the principle of simple anteflexion, reason would suggest that the appropriate method of replacement would be the treatment of the cases in the same manner as in retrodeviations, viz., to return the os to its normal location, leaving the fundus to right itself, and thus far our experience sustains these conclusions.

CHAPTER IV.

Thus far we have been studying uterine deviations, unassociated with any tissue metamorphosis. We will now give a brief consideration to those morbid uterine derangements associated with structural change. Flexions of the uterus are usually preceded by, and found complicated with, prolapsed vaginal walls, but this complication does not always exist, for we sometimes find the most obstinate flexions in the virgin, and also in married women whose vaginal walls are intact.

We will enumerate briefly some of the influences producing flexions.* First on the list come those distortions which are the sequelæ of versions consequent upon degeneration of vaginal and uterine structures.

When the cervix uteri is deprived of its normal bearings, the uterine body first totters under its own and superimposed weight, and proceeds to bend upon itself. Second—those cases which are the product of inflammatory processes, some portion of the uterus or appendages has been the seat of hyperæmia, which has caused an exudation of lymph. This circumscribed interstitial deposit becoming organized, welds

* When speaking of flexures of the uterus we refer to distortions at or above the cervical junction. When occurring below that point they are comparatively unimportant.

the tissue fiber together, producing fixedness, and subsequent contraction of the involved textures. In this way the freedom of circulation, and normal movement of the uterus are interfered with, while the fundus, through this local shortening is induced to gradually bend over the point of disturbance. Third — there is a condition of atony in which the uterine walls are soft, flaccid and thin, possessing slight power of resistance, and bending from sheer flabbiness. Another rare cause is found in neoplasmata. Any of these may separately be the occasion of the misfortune or they may coexist. From whatever cause these flexions arise it is their disposition to steadily progress, with a corresponding increase of constitutional disturbance. For the sake of elucidation we will revert to the familiar processes of textural change as witnessed in a limb, which has for some reason been kept in a fixed bent position for a prolonged period. The flexor tissues become shortened and atrophied at the seat of flexure, and the extensors become elongated and lose their power to straighten the limb. This with interstitial deposit, furnishes a condition which is not always easily overcome with all the advantages of direct appliances. Now this is exactly what occurs in the uterine body when it is permitted to occupy a distorted position for some length of time. The concave surface becomes shortened and wasted, while the convex wall is elongated: more than this the flexure when acutely formed, obstructs the circulation, not only at the angle of flexure, but by the twisting of the broad ligaments upon themselves so that the nutrition of the parts is impaired and hyperplasia (the product of

blood stasis) complicates the morbid process. The longer this condition remains unrelieved, the more firmly established become the tissue degeneration, interstitial deposit, and deformity. Flexions of the womb, however, do not always demand active interference, for they may exist without creating any appreciable disturbance: on the other hand, they may be the source of great suffering. We cannot account for this dissimilitude, any more than we can explain the reason why a slight dental defect will cause exquisite suffering to one person, while another may be indifferent to a much greater defect of the same nature. The disturbance caused by this deformity is greatly exaggerated during the catamenia, or just before the flow is established. This exacerbation is probably in a measure due to irritation of the nerve filaments and tissues which are held in the seat of flexure, which irritation is produced by the efforts of the uterus to straighten itself during the period of engorgement.

The question now to be decided is, how can this condition be removed. We recognize that the first desideratum is the straightening of the uterus. If straightened by means of the sound it frequently will resume its dislocation immediately upon the withdrawal of the instrument. Any attempt to replace it, *per vaginam*, only causes it to oscillate as if pivoted at the point of flexure. This is a very annoying and perplexing dilemma. Here is an organ, insignificant in size, and only from one and one and a half to two ounces in weight, yet the cause of profound constitutional disturbance, through its cramped position, which de-

formity seems to defy all mechanical ingenuity. Beside, as a rule, these uteri are very irritable at the point of flexure, and in the pendant fundus. These being the seat of mischief, we would therefore naturally infer that it would be unwise to use any measure which would aggravate the trouble at these points. Our chief hope of cure lies in the establishment of a free capillary circulation. Let us see how this principle is regarded in the stereotyped mode of flexion treatment. Take for example the very common form of flexion—the bending of the uterus backward upon itself through a diseased, contracted portion of its posterior wall, resulting from hyperæmia. Examine such a uterus, *per vaginam*, and the angle of flexure is sensitive, as is the accessible fundus lying in the cul-de-sac. Introduce a probe into the uterine canal and by the pain produced as soon as the sound reaches the diseased point, the patient will tell you the location of the bend in the posterior wall. Exploration will demonstrate beyond a doubt, that the fundus with the flexure angle are the diseased parts.

Confronted with all this we are nevertheless directed by all the authorities in this department, to replace these uteri and keep them replaced by the aid of a vaginal retroflexion pessary, and to enforce these doctrines we are presented with a diagram representing the uterus perfectly replaced by one of these vaginal appliances. It makes a most satisfactory picture and reads plausibly, but unfortunately the truth shows us quite another phase of affairs, as any one who has not already taken pains to do so may demonstrate for himself. In the first place the hard

foreign body in the vagina makes its objective pressure directly against the diseased tissues, and by its bruising will invariably irritate the existing cause of the abnormality which we are seeking to relieve, so that the congestion which at the insertion of the pessary may have been somewhat circumscribed, may (on its removal) be sufficiently developed, to involve other adjacent tissues. In the second place, this form of appliance seldom straightens the distortion, as we have proved over and again. It will push the os backward and upward, so as to make it appear that the uterus is normally placed, but the real *modus operandi* is this. The cervix is properly located, but the fundus is only pushed upward and tilted forward somewhat, but does not and cannot fall forward over the bladder, for the foreshortening of the posterior wall, intensified by the pressure of the distal extremity of the pessary, prevents it from taking an anteverted position. So then the fundus is merely pushed out of reach of the finger, but continues to bend over the pessary. This is easily proved to be the case by exploring the cavity with a delicate probe, when the pessary is in situ, or by the bimanual method in sufficiently thin subjects. Remove the pessary and draw the os greatly forward and the uterus presents itself in precisely the same bent condition. Bear in mind we are not discussing recent flexions, but those in which tissue metamorphosis has occurred. The evil arising from the use of the anteflexion pessary is still greater, for it not only produces permanent atony of the urethro-vesico-vagino-uterinal tissues without straightening the uterus, but to a great degree it destroys the perinaeal body, and altogether induces an ex-

ceedingly undesirable condition of this part of the vagina. Looking by the light of reason at this manner of treatment of flexions, need we wonder that "incurable" is the universal verdict passed upon them? It would indeed be a marvel if such incorrect measures yielded satisfactory results. An authentic cure of uterine flexions by these vaginal manipulations, has yet to be reported. The writer can unqualifiedly assert that he has never witnessed any ultimate benefit arise from these measures, but has often regretted that he ever inserted one of these mischief working pretensions, and we do not believe that our experience differs greatly from that of others.

When this vaginal support has been worn for a considerable length of time, and is then withdrawn, the patient always complains of suffering greatly from a feeling of dragging, and why? Simply from the fact that the natural supports of the organs are further impaired, while new lymph deposit and adhesions have been excited by the presence of the pessary, and when it is removed traction is exerted upon these recent adhesions, causing pain. We have repeatedly witnessed marked instances of organized plastic exudation throughout the areolar tissue surrounding the vagina, from the presence of a pessary, and one too that did not produce undue stretching of the parts. Again the writer has been informed that pessaries had been worn twenty years with constantly increasing discomfort, yet with the firm belief that it was a necessity that must be borne. In all these cases of prolonged wearing, the adhesions had become very extensive, and the prospect of restoration of the uterus forever destroyed. Also

with this there was invariably associated a debilitating chronic catarrh of the parts, induced by the prolonged presence of the foreign body. Nor were these patients in the hands of inexperienced novices, but were often cared for by physicians of excellent standing, some of them occupying the position of teachers in this department. It seems incredible that in this advanced age, there should exist such steady persistence in these irrational and unfortunate methods of treatment, but that it does exist, and that our textbooks are filled with such errors cannot be denied. To undertake the cure of a chronic flexure of the uterus is a task most difficult to achieve. Here we have an elastic, bent organ, presenting no possible opportunity of being straightened by any extra-uterine treatment. There is but one rational plan to pursue, and that is the introduction of a splint within the cavity of the bent uterus, whereby it can be placed in its normal position, and retained there a sufficient length of time, until nature has by absorption and new deposit established the parts in proper condition. There are absolutely but two alternatives: either to devise and adopt some such mechanical means, or to abandon the patient to her misfortune, fated to a life of progressive wretchedness. For a long time the necessity of an intra-uterine splint has been felt by the profession, and its merits and demerits freely discussed. Why the stem pessary has so long occupied this debatable ground is readily explained. Its indispensability has everywhere furnished its advocates, while the crude, evil looking instruments presented, naturally stimulated an opposition. Surely the inventors of many of these in-

struments must have had a very imperfect appreciation of the nature of the highly organized structures under consideration. Fortunately for all concerned, the uterus, while delicately organized and entitled to the gentlest manipulation, is also astonishingly tolerant of rough usage. Those conversant with uterine pathology must have been impressed with the freakishness often displayed by this organ. A womb that will resist the introduction of a sound, or even a delicate probe, developing alarming symptoms therefrom, will undergo the ordeal of *gradual* dilation and gentle deviation to a remarkable extent without evincing marked annoyance. Indeed, the uterus is in complete accord with its whimsical owner. Either is disposed to resent sudden encroachments, or rude shocks, and will rebel if undue force be applied, but by gentle measures, and gradual approaching tactics, the crotchets of either may be avoided. This principle cannot be overestimated, and it demands earnest application in the treatment of these cases, if we would avoid discomfiture. A *résumé* of the writer's experience might be expressed as follows: Rigid stem pessaries having an external support connected to a band encircling the body, are reprehensible, as they necessarily prevent the natural play of the uterus, drag it forward, and subject it to injurious shocks from within and without. Appliances having a solid base or firmly connected with the vaginal portion, are dangerous, as they preclude the normal movements and vibrations of the uterus, and bruise the sensitive os-tincæ, while they are wholly impracticable in the treatment of virgins. The simple stem with small round vaginal bulb, is often useless, as un-

supported it has a tendency to drop out into the vagina, and when made to press against the os by the use of tampons, is liable to work into the cavity of the womb, the os being prone to dilate and swallow the bulb, thereby endangering the fundus, and causing no little embarrassment in the removal.

The simplest method of employing the stem pessary, and one which will frequently be found satisfactory, is an association of the intra-uterine stem, and the vaginal pessary disconnected. A stem with a broad polished button is inserted in the uterine canal, and then a vaginal pessary properly constructed fixes the uterine neck in the sacral cavity. If the uterus be easily reduced and the posterior vaginal wall sufficiently resistant, the stem retains its position and the uterus is straightened. It is hardly necessary to state that when a vaginal support for a virgin is to be selected, it should be narrow and as delicately formed as is practicable. In dealing with these, and for the matter of that, with the majority of cases where the vaginal textures are sufficiently firm, we are accustomed to retain the stem by the use of a cotton pledget saturated with the aluminated glycerine previously mentioned. When the patient has a large, lax vagina, these procedures are not usually feasible, for with this condition the stem is liable to slip partially or entirely out of the uterus, owing to the disposition of this organ to retrovert, together with the laxity of the vaginal walls, and the influences exerted by an over distended bladder. Furthermore, these cases frequently belong to the class that can ill afford the repeated attention which the proper adjustment of a tampon necessitates. When therefore we meet

with these conditions we immediately look about for a trustworthy appliance which will fulfill these indications. In other words we desire an instrument comparatively safe to the patient, easy of introduction, self-retaining, and in no way resisting the natural movements of the uterus. The value of the instrument will also be enhanced, if while straightening the uterus and holding it in position, it at the same time supports the vaginal walls.

The diagram (Fig. 7) represents an instrument which we have found to fairly meet these requirements. It is made from one continuous piece of vulcanite. The tongue connecting the stem and vaginal portions, is so tempered as to be soft and



FIG. 7. Flexion Pessary.

elastic. The stem also can be rendered elastic if desirable, and may contain a spiral spring of steel wire. Its introduction may readily be accomplished in the following manner. The uterus is allowed to remain unreduced, with its os looking toward the vulva. The instrument is pressed down by the forefinger so as to lie parallel with the outer portion (Fig. 8). The point of the stem is then guided into the uterine canal, and as the stem enters the uterus, the vaginal part is

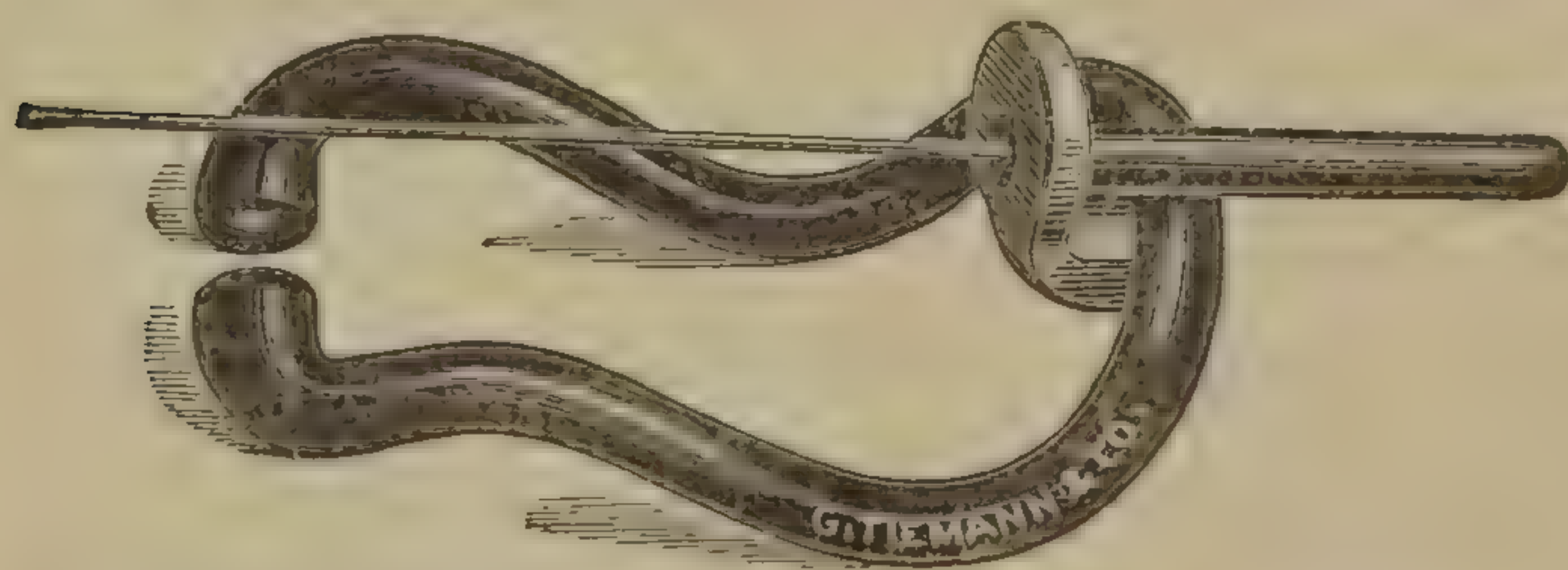


FIG. 8. Flexion Pessary in Position for Insertion.

made to advance into the vagina. As it assumes its proper position, it carries the cervix into the hol-

low of the sacrum, which necessitates the reduction of the fundus. Those who have the facilities at hand, can employ the Sims' speculum, and the introducing staff, for the accommodation of which the stem is perforated. The vaginal portion is made in different sizes, and should never be so large as to produce any stretching of the vaginal walls, and it should always be considerably smaller than the lever pessary which would ordinarily be selected for the individual case when treated with the vaginal support alone.

It must be understood that this instrument is only designed for appropriate cases, or where the vagina is sufficiently patulous to admit this form of instrument, and to attempt its application in virgins would be wholly unpardonable. While we regard this method of treatment as perfectly safe when intelligently employed, let it be understood we do not advocate its indiscriminate use, for the physician who presumes to treat the uterine cavity with the same indifference shown the vagina, will surely encounter disaster and defeat. Therefore, let him proceed cautiously, and with extreme gentleness. He may expect to be obliged to remove the stem within a few hours of its insertion, as its presence occasionally provokes severe uterine colic, and reflex disturbance. These are by no means a proof that the treatment must be abandoned, for frequently it occurs that these irritable subjects ultimately furnish the most satisfactory results. In a day or two after removal, the stem may be reinserted, when the uterus will be found more tolerant. In this manner the difficulties are gradually overcome, until the presence of the pessary is unnoticed. Some hemorrhage is not an unusual occur-

rence for the first few days, but this is not an alarming symptom, quite the reverse, as it disgorges the loaded capillaries, promotes absorption and prevents hyperæmia. The patient should be advised to promptly remove the instrument on the inception of severe pain, or general irritation, and for the accomplishment of this, a silk thread must be attached to the lower extremity. This precaution should be observed for at least a week with any intra-uterine appliance, when, as a rule, all symptoms of irritation will have subsided. The majority of patients will experience but slight discomfort from the first introduction, but we deem it advisable to guard against all possible unpleasant contingencies. When the uterine canal is narrow it will be necessary to first dilate with a small sponge or tupelo tent, before inserting the stem, which should not be introduced until two days after the removal of the tent. We are aware that there are many whose minds are prejudiced by the dicta of certain high authorities, or by the results of unskillful personal experience, who will regard any approval of intra-uterine treatment as extremely unsound doctrine, and we have no desire to disabuse such minds of their aversion. We have never experienced any disastrous results from the discriminate use of intra-uterine appliances, and they have succeeded where all other means were of no avail; and while we fully appreciate and respect the objections advanced, we also realize the fault may have been with the operator rather than the means. Our position is well sustained by eminent authority. Dr. Goodell, in commenting upon the use of the stem pessary, in his *Lessons on Gynæcology*, after citing

his former adverse opinions, makes these suggestive remarks: "But since then a riper experience has taught me a good deal about this pessary, and has wholly changed my views with regard to its use. I now hold that there are stubborn cases of anteflexion and for the matter of that retroflexion too, which can be satisfactorily treated in no other way than by the stem. Not a month now passes without finding one or more of my patients under its use. So changed indeed are my views on this point, that in a discussion upon this instrument at one of the meetings of the 'American Gynæcological Society,' held in Boston, I stated that I had left two unmarried ladies in Philadelphia, each wearing this kind of pessary."

We might quote at length many other instances wherein prejudice has been overcome by the substitution of a skillful use for the abuse of this form of treatment.

Before dismissing the subject, we will give a brief consideration to the galvanic stem pessary. What are the precise advantages possessed by the galvanic stem over one of vulcanite, we are not prepared to explain. We believe, however, there are good reasons for claiming for it merits not found in the latter. The conditions which seem to indicate its use are, non-development of the uterus and ovaries, which condition is usually the sequence of neglected physical training, or the perversion of the vital forces during early womanhood; or the womb may be flaccid and spindle-shaped, causing it to bend through sheer flabbiness. When these morbid states exist, the galvanic stem acts as a stimulus to the capillaries, and in this way aids in the development of the tissues,

and thereby imparts tonicity. Whether this energizing effect is due to that subtle fluid, electricity, or to the more material product of metallic decomposition, we will not attempt to prove. This form of intra-uterine treatment has many warm advocates among men of high repute.

Lawson Tait, F. R. C. S., London, in his article on the uterus, remarks: "In cases of amenorrhœa or dysmenorrhœa, we constantly find that the uterus, and also its associated organs, have been insufficiently developed, and have retained more or less of their infantile character. This condition is readily to be diagnosed by the state of the cervix. It is small and nipple like, the canal being correspondingly contracted, and there is almost always a marked degree of anteflexion. Very many instances of the 'infantile uterus' will be met with in young women otherwise perfectly formed and apparently in the most robust health. In these cases iron alone is of no manner of use. What is wanted is a mechanical stimulus to the uterus, and that is best afforded by Simpson's galvanic pessary. The general treatment of these cases, I have discussed in the chapter on the diseases of the ovaries, for they are the organs chiefly affected. Accompanying this arrest of development of the sexual organs, we have many diseases of the nervous system directly due to it, more especially epilepsy. In hospital practice I have seen a large number of cases of epilepsy due to menstrual suppression or insufficiency, and which have completely recovered as soon as the function has been properly established.

"Stricture of the cervical canal, save in well

marked cases of arrest of development, or from traumatic causes, is not at all frequent, though stricture of either of its orifices is very common, especially that of the external os, already described. Stricture of the canal is best treated by its gradual dilatation by means of intra-uterine stems, especially the galvanic stem."

Also in his discussion on the Treatment of Ovarian Dysmenorrhœa.

"The last and most powerful aid is mechanical irritation of the uterus; but as it is not free from risk, and therefore requires careful use, it is not always to be recommended. It is, besides, in the class of cases where the uterus is most at fault that it is least risky and most serviceable. The method of irritation I generally employ, as the most convenient and least troublesome, is the insertion of Simpson's galvanic pessary. This instrument has been by some writers very much decried, but I think by those only who seemed to have used it indiscriminately, and without reference to a proper selection of cases.

"The irritation set up by the presence of a galvanic stem in the uterus is communicated indirectly to the ovaries in a manner that is not as yet explicable, but that it has an influence is beyond doubt, and if it remain within bounds it is in a large number of cases beneficial. A large experience has shown me that it is only in occasional instances that the stem cannot be borne, and that if carefully watched during the first few weeks of its use, these cases are easily governed. In a case where I have been led to regard the use of the stem as advisable, I always begin with a small size, and after this has been worn for three or four months

I change it for a larger one. For the first week after its introduction it is not unusual for the galvanic stem to give rise to considerable discomfort and even positive pain, but this usually passes off if the patient keeps her bed for a few days, and there is no further trouble save from the leucorrhœal discharge, which is a part of the process. The action of the stem is not purely mechanical as has been stated; for very soon after its insertion, the zinc becomes coated with an albuminous deposit, from which the copper is free, and the zinc becomes corroded. It is certain therefore that there is a galvanic action set up, and the stimulating effects are due partly to this and partly to the interior of the uterus being constantly bathed in a weak solution of chloride of zinc. However produced, it is certain that the uterus enlarges rapidly under the action, and there is every reason to believe that the ovaries take part in the increased activity. If once the uterus becomes accustomed to the presence of the galvanic stem, it may be worn for many months, and the longer it is retained, the more permanent will be the benefit; but if after a trial of a few months, say four or five, there is no apparent alteration for the better, the attempt should be given up and the case considered as hopeless. In a very large number of cases of incompletely developed ovaries, another remnant of infantile life is met with in an exaggeration of the normal curve of the uterus, amounting sometimes to complete ante flexion, and in this class of cases the galvanic stem is especially serviceable."

To accomplish the twofold object of straightening the uterus and stimulating capillary action, we have constructed an intra-uterine voltaic pile in the

following manner. Upon a vulcanite rod is placed a number of zinc and copper rings insulated with others



Galvanic Stem Pessary.

of vulcanite, the whole secured by a tip of vulcanite screwed upon the end of the rod. In this way we avoid the direct and successive contact of the metals, and cause the tissues to act as the connecting medium.

No definite rule can be given as to the length of time a galvanic stem is to be worn, owing to the wide diversity existing in the nature of uterine secretions. This point must be determined by the amount of corrosion of the metals, and by the symptoms of irritation produced. By some, the instrument will be worn for weeks without inconvenience, while in other instances it will be found necessary in two or three days to substitute the vulcanite stem for the galvanic. After an interval of a week, the latter should be reinserted, and so alternate until the desired effect has been attained. We cannot too strongly condemn the use of those stems constructed of parallel bars of copper and zinc, since their prolonged presence in the uterus produces lateral cauterization of this organ, which will very likely result in subsequent distortion through the process of cicatrization. It must be remembered that through chemical action, salts of these metals are formed, which are capable of doing much injury when brought in contact with the tissues for a lengthy period.

For obvious reasons we have omitted to include in this paper all reference to medicinal interference. That the health of the generative organs is profoundly influenced by the condition of the general secretions, may be regarded as a fact too well established to re-

quire comment, and it is equally patent that it is as important to study faithfully how to correct the perversion of these secretory processes as it is to understand correct mechanical manipulation of uterine displacements, but it is the totality of the symptoms of each individual case, duly pondered upon, that alone can guide us in the selection of the appropriate drug remedy. Nor is it the physical conditions only that we are called upon to consider, for it is incumbent upon us that we step over the border line into the psychical domain, and include all mental phenomena in our analyses. As gynæcologists we cannot overestimate this important feature of our specialty, having as we do frequent opportunities for observing remarkable instances of this psychological influence. Patients frequently apply to us whose uteri retain a normal position so long as a happy mental state is maintained, but with the occurrence of grief will recur the displacement.

Who among us cannot recall instances in which a dysmenorrhœa that has resisted our best drug selection has disappeared as if by magic upon an agreeable change of surroundings, or upon the removal of some cause of sorrow. We are acquainted with the familiar effects of mental perturbation upon the action of the kidneys, bowels, and heart, nor can we name a gland whose secretion is not in sympathy with the mind. As with the glands so with all the tissues, each of which will reflect in some degree every passing emotion.

Notice the semiotics of grief or disappointment. The facial muscles relax or contort, the limbs droop, the trunk is bowed, while the eyes grow lusterless and

sunken. The mammæ lose their plumpness, become atrophied, and at times yield grief-poisoned fluid. These psychological phenomena are familiar to us, but are too often entirely forgotten, whereas they deserve our most thoughtful attention. If these indifferent organs respond so readily to mental emotions, what allowance may we not make for mental domination over the generative organs, which we know to be much more intimately associated through the sympathetics to the great nerve centers. As physicians we will do well to guard against the powerful spirit in our profession which tends to egoisms and art devices. Let us study more faithfully the lessons taught by nature, for it is only when we have learned to fathom the deep sea soundings of cause and effect underlying and governing all mental and physical conditions, that we can hope to acquit ourselves satisfactorily.



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